

FY2016

FORT WAINWRIGHT
Army Defense Environmental Restoration Program
Installation Action Plan

Printed 13 October 2016

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Statement of Purpose

The purpose of the installation action plan (IAP) is to outline the total multiyear cleanup program for an installation. The plan identifies environmental cleanup requirements at each site or area of concern (AOC), and proposes a comprehensive, installation-wide approach, along with the costs and schedules associated with conducting investigations and taking the necessary remedial actions (RA).

In an effort to coordinate planning information between the restoration manager, the US Army Environmental Command (USAEC), Fort Wainwright (FWA), the executing agencies, regulatory agencies, and the public, an IAP was completed. The IAP is used to track requirements, schedules, and tentative budgets for all major Army installation cleanup programs.

All site-specific funding and schedule information has been prepared according to projected overall Army funding levels and is, therefore, subject to change.

Acronyms

1,2 DCA	1, 2-dichloroethane
AAA	Anti-Aircraft Artillery
ADEC	Alaska Department of Environmental Conservation
AEDB-R	Army Environmental Database - Restoration
AK	Alaska
AOC	Area of Concern
AS	Air Sparging
AST	Aboveground Storage Tank
ATF	Aviation Task Force
bgs	below ground surface
BHTF	Birch Hill Tank Farm
Bldg	Building
CANOL	Canadian Oil
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act of 1980
CLOSES	Cleanup Operations and Site Exit Strategy
COC	Contaminant of Concern
COE	Corps of Engineers
CRAAP	Chena River Aquatic Assessment Program
CTC	Cost-to-Complete
CVP	Concrete Valve Pit
cy	cubic yard
DCA	dichloroethane
DERA	Defense Environmental Restoration Account
DERP	Defense Environmental Restoration Program
DFO	Diesel Fuel Oil
DLA	Defense Logistics Agency
DMM	Discarded Military Munitions
DoD	Department of Defense
DPW	Directorate of Public Works
DRMO	Defense Reutilization and Marketing Office
DRO	Diesel Range Organics
EBHTF	East Birch Hill Tank Farm
EDB	Ethylene Dibromide
EQFS	East Quartermaster's Fueling System
ER,A	Environmental Restoration, Army
ESD	Explanation of Significant Differences
FARP	Forward Air Refueling Point
FEP	Fairbanks-Eielson Pipeline
FES	Fairbanks Environmental Services, Inc.
FFA	Federal Facilities Agreement
FFT	Fairbanks Fuel Terminal
FRA	Final Remedial Action
FS	Feasibility Study
FTWW	AEDB-R designation for Fort Wainwright
FWA	Fort Wainwright

Acronyms

FY	Fiscal Year
GIS	Geographic Information System
GRO	Gasoline Range Organics
HFP	Haines-Fairbanks Pipeline
HHRA	Human Health Risk Assessment
IAP	Installation Action Plan
IC	Institutional Control
IDW	Investigation-Derived Waste
IEDD	Improvised Explosive Device Detection
IMCOM	Installation Management Command
IMP(O)	Implementation (Operation)
IRA	Interim Remedial Action
IRP	Installation Restoration Program
ISCO	In Situ Chemical Oxidation
ISCR	In Situ Chemical Reduction
ITR	Independent Technical Review
K	thousand
LAAF	Ladd Army Airfield
LAFB	Ladd Air Force Base
LIDAR	Light Detecting and Ranging
LTM	Long-Term Management
LTMO	Long-Term Monitoring Optimization
LUC	Land Use Control
MAROS	Monitoring and Remediation Optimization System
MC	Munitions Constituents
MCL	Maximum Contaminant Level
MD	Munitions Debris
MEC	Munitions and Explosives of Concern
MMRP	Military Munitions Response Program
MNA	Monitored Natural Attenuation
MOGAS	Leaded Gasoline
MOUT	Military Operation in Urban Terrain
MRS	Munitions Response Site
N/A	Not Available
NFA	No Further Action
NFRAP	No Further Remedial Action Planned
NFS	non-frost susceptible
NPL	National Priorities List
OB	Open Burn
OD	Open Detonation
ORV	Off Road Vehicle
OU	Operable Unit
PA	Preliminary Assessment
PAH	Polyaromatic Hydrocarbon
PCB	Polychlorinated Biphenyl

Acronyms

PCE	tetrachloroethane
PID	Photoionization Detector
POL	Petroleum, Oil and Lubricants
PP	Proposed Plan
ppm	parts per million
PSE	Preliminary Source Evaluation
RA	Remedial Action
RA(C)	Remedial Action - Construction
RA(O)	Remedial Action - Operation
RAB	Restoration Advisory Board
RAG	Remedial Action Goals
RAO	Remedial Action Objectives
RBC	Risk Based Concentration
RC	Response Complete
RCRA	Resource Conservation and Recovery Act
RCRA	Time-Critical Removal Action
RD	Remedial Design
RDX	Cyclotrimethylenetrinitramine
RI	Remedial Investigation
RIP	Remedy-in-Place
ROD	Record of Decision
ROLF	Railcar Off-Loading Facility
ROST	Rapid Optical Screening Tool
RPM	Remedial Program Manager
RRO	Residual Range Organics
SI	Site Inspection
SP	screen point
SRC	Seward Recreational Camp
SVE	Soil Vapor Extraction
SVOC	Semi-Volatile Organic Compound
TAPP	Technical Assistance for Public Participation
TBD	To Be Determined
TCE	Trichloroethylene
TFS	Truck Fill Stand
TRC	Technical Review Committee
TS	Treatability Study
TSDF	Transportation, Storage and Disposal Facility
UIC	Underground Injection Control
USACE	US Army Corps of Engineers
USAEC	US Army Environmental Command
USARAK	US Army Alaska
USBLM	US Bureau of Land Management
USEPA	US Environmental Protection Agency
UST	Underground Storage Tank
UXO	Unexploded Ordnance

Acronyms

VA US Department of Veterans Affairs
VOC Volatile Organic Compound
WP Work Plan
WQFS West Quartermaster's Fueling System

Site Alias List

AEDB-R Site ID to Alias List

AEDB-R #	Alias
CC-FTRS-04	FRA9300001
CC-FTWW-01	FTW9100026
CC-FTWW-02	FWA9100026
CC-FTWW-03	FWA9100026
CC-FTWW-103	ATF
CC-FTWW-104	
CC-FTWW-105	
CC-FTWW-106	
CC-FTWW-107	
CC-FTWW-108	
CC-FTWW-109	
CC-FTWW-110	
CC-FTWW-111	
CC-FTWW-112	
CC-FTWW-113	
CC-FTWW-114	SITE N-4
FTWW-001	NFA
FTWW-001-R-01	
FTWW-002-R-01	
FTWW-004-R-01	
FTWW-008-R-01	Range
FTWW-011	OU4/2A
FTWW-023	NFA
FTWW-024	NFA
FTWW-026	NFA
FTWW-037	NFA
FTWW-038	OU4/1A
FTWW-047	OU2/1A
FTWW-050	2PY/REM/2A
FTWW-055	OU3/1A
FTWW-057	USTR/3A
FTWW-061	NFA
FTWW-063	NFA
FTWW-064	NFA
FTWW-067	OU1/1A
FTWW-072	OU2/3A
FTWW-079	NFA
FTWW-083	OU3/1A
FTWW-084	OU3/1A
FTWW-085	UST-LTM/3A
FTWW-086	NFA
FTWW-087	USTR/2A
FTWW-094	OU5/1A

Site Alias List

FTWW-096	OU5/2A
FTWW-097	UST/3A/NFA
FTWW-099	USTR/2A
FTWW-100	USTR/3A
FTWW-101	2P/1A
FTWW-102	TakuGarden

Installation Information

Installation Locale

Installation Size (Acreage): 1578340.93

City: Fairbanks

County: Fairbanks North Star Borough

State: Alaska

Other Locale Information

FWA is situated in central Alaska within the Fairbanks North Star Borough on the eastern boundary of the city of Fairbanks, the state's second largest city. The fort consists of the main post cantonment area that is approximately 20,553 acres, 8,825 acres of ranges and 1,548,962 acres for military maneuvers for a total of approximately 1,578,340 acres.

Installation Mission

The mission of the US Army Garrison, Fort Wainwright is to execute continuous training and readiness oversight responsibilities for the Army Force Generation in Alaska. US Army Garrison Alaska also provides the Pacific Region with focused, early entry battle command capability for US Army Pacific and Joint Force Land Component Commander for Homeland Defense and Security in Alaska.

Lead Organization

IMCOM

Lead Executing Agencies for Installation

United States Army Corps of Engineers (USACE) Alaska District

Regulator Participation

Federal	US Environmental Protection Agency (USEPA), Region 10
State	Alaska Department of Environmental Conservation (ADEC)

National Priorities List (NPL) Status

A score of 50 was recorded on 01-AUG-90.

Date for RA(C) Completion: 201604

Date for NPL Deletion: TBD

Installation Restoration Advisory Board (RAB)/Technical Review Committee (TRC)/Technical Assistance for Public Participation (TAPP) Status

RAB established 199709

Installation Program Summaries

IRP

Primary Contaminants of Concern: Metals, Pesticides, Petroleum, Oil and Lubricants (POL), Polychlorinated Biphenyls (PCB), Semi-volatiles (SVOC), Volatiles (VOC)

Affected Media of Concern: Groundwater, Soil

MMRP

Primary Contaminants of Concern: Munitions and explosives of concern (MEC), Munitions constituents (MC)

Affected Media of Concern: Groundwater, Soil

Installation Information

CR

Primary Contaminants of Concern: Dioxins/Dibenzofurans, Metals, Pesticides, Petroleum, Oil and Lubricants (POL), Polychlorinated Biphenyls (PCB), Polycyclic Aromatic Hydrocarbons (PAH), Semi-volatiles (SVOC), Volatiles (VOC)

Affected Media of Concern: Groundwater, Sediment, Soil

5-Year / Periodic Review Summary

5-Year / Periodic Review Summary

Status	Start Date	End Date	End FY
Complete	201105	201109	2011
Complete	200605	200609	2006
Complete	200109	200109	2001
Underway	201502	201609	2016

Last Completed 5-Year / Periodic Review Details

Associated ROD/DD Name	Sites
OPERABLE UNIT 1-ROD	FTWW-067
OPERABLE UNIT 2-ROD	FTWW-047, FTWW-072
OPERABLE UNIT 3-ROD	FTWW-048, FTWW-055, FTWW-083, FTWW-084
OPERABLE UNIT 4-ROD	FTWW-011, FTWW-037, FTWW-038
OPERABLE UNIT 5-ROD	FTWW-003, FTWW-049, FTWW-050, FTWW-056, FTWW-057, FTWW-062, FTWW-064, FTWW-068, FTWW-073, FTWW-085, FTWW-086, FTWW-087, FTWW-089, FTWW-091, FTWW-094, FTWW-095, FTWW-096, FTWW-097, FTWW-098, FTWW-099, FTWW-100, FTWW-101
OPERABLE UNIT 6-ROD FCS (Taku Gardens)	FTWW-102
OU3 ESD	FTWW-055, FTWW-083, FTWW-084
OU6 (Former Comm Site) Amendment to FFA	FTWW-102
OU6 Action Memorandum	FTWW-102

Results 5 year Review is complete.

Actions All stakeholders have signed the document.

Plans Next 5 year Review scheduled for Sept 2016.

Recommendations and Implementation Plans:

Site-Wide Summary and Recommendations

- Record of decision (ROD) commitments are being met. Management of Fort Wainwright NPL site remediation under the Federal Facilities Agreement (FFA) has been very effective. This effectiveness translates into a good rate of progress implementing the RAs specified in the RODs and is in the best interest of the public and the environment.
- Public Information Repositories: the three Fort Wainwright public information repositories were visited on May 11, 2011. The visits found the repositories to be generally meeting Comprehensive Environmental Response, Compensation and Liability (CERCLA) requirements and public needs. Recommendations included providing the administrative record exclusively on CDs for public use and updating the record at the Noel Wein library and the Post library with the explanation of significant differences (ESD) and the five-year reviews. A status report on the five-year review site visits is included in Appendix C of this report.
- Institutional Controls: all five Fort Wainwright RODs specify institutional controls (IC) to ensure protection of human health and the environment. Standard operating procedures for ICs were adopted by United States Army Alaska (USARAK) at the close of the OU5 ROD in 1999 with input from EPA and ADEC. In the fall of 2001, the Institutional Control Memorandum signed by Major General Cash dated February 1999, was updated to require a work authorization permit for all groundwater and soils on USAG-AK lands. This revised memorandum, signed by the Commanding General, includes a section on areas with ICs mandated by a ROD, and a section on areas where contamination is not suspected. Currently, all contracts that include intrusive activities require a work authorization permit. The permit was updated in May 2011 to clearly alert the user about procedures A US Army Garrison Fort Wainwright Policy #49 was completed and signed on Dec. 28, 2001.

Land Use Control (LUC) Summary

LUC Title: Institutional Controls

Site(s): FTWW-067

ROD/DD Title: OPERABLE UNIT 1-ROD

Location of LUC

The only site under OU1 is FTWW067, former 801 drum burial site. Institutional controls are in place thru USARAK SOP.

Land Use Restriction: Media specific restriction - Prohibit groundwater extraction that interferes with Remedial Action system, Media specific restriction - prohibit use of groundwater for consumption or domestic purposes, Media specific restriction - restrict withdrawal or use of groundwater w/out treatment, Restrict land use - No daycare/hospital/school use, Restrict land use - No residential use

Types of Engineering Controls: Signs

Types of Institutional Controls: Dig Permits, Notations in Master Plan, Restrictions on Groundwater Withdrawal, Zoning

Date in Place: 199208

Modification Date: N/A

Date Terminated: N/A

Inspecting Organization: Installation

Record of LUC: Master Plan or Equivalent

Documentation Date: N/A

LUC Enforcement: 5 Year Reviews

Contaminants: ORGANICS

Additional Information

N/A

LUC Title: Institutional Controls

Site(s): FTWW-047, FTWW-072

ROD/DD Title: OPERABLE UNIT 2-ROD

Location of LUC

Institutional Controls are in place at FTWW-072/former bldg 1168 and FTWW047, the DRMO yard thru USARAK SOP. The DRMO yard is a secured, fenced and locked area. At 1168, ICs are in place even though active treatment has ceased because RAOs have been reached for active treatment. System operation continues at DRMO.

Land Use Restriction: Landfill restriction - Restrict access to the site, Media specific restriction - Prohibit, or otherwise manage excavation, Media specific restriction - Prohibit, or otherwise manage excavation below a specified depth, Media specific restriction - prohibit use of groundwater for consumption or domestic purposes, Media specific restriction - restrict drinking water well installation, Media specific restriction - restrict withdrawal or use of groundwater for agricultural/irrigation purposes, Media specific restriction - restrict withdrawal or use of groundwater w/out treatment, Restrict land use - No daycare/hospital/school use, Restrict land use - No residential use

Types of Engineering Controls: Fences, Signs

Types of Institutional Controls: Dig Permits, Notations in Master Plan, Restrictions on Groundwater Withdrawal, Restrictions on land use, Zoning

Date in Place: 199406

Modification Date: N/A

Date Terminated: N/A

Inspecting Organization: Installation

Record of LUC: Master Plan or Equivalent

Documentation Date: N/A

Land Use Control (LUC) Summary

LUC Enforcement: 5 Year Reviews

Contaminants: ORGANICS, PETROLEUM HYDROCARBON

Additional Information

N/A

LUC Title: Institutional Controls

Site(s): FTWW-048, FTWW-055, FTWW-083, FTWW-084

ROD/DD Title: OPERABLE UNIT 3-ROD

Location of LUC

Sites include FTWW-055, Fairbanks Fuel Terminal, which has IC's in place including fencing; FTWW-083, The Railcar Offloading Facility with IC's in place; and FTWW-084, Pipeline Spills with IC's in place. All IC regulated under USARAK SOP.

Land Use Restriction: Media specific restriction - Prohibit, or otherwise manage excavation, Media specific restriction - Prohibit, or otherwise manage excavation below a specified depth, Media specific restriction - prohibit use of groundwater for consumption or domestic purposes, Media specific restriction - restrict drinking water well installation, Media specific restriction - restrict withdrawal or use of groundwater for agricultural/irrigation purposes, Media specific restriction - restrict withdrawal or use of groundwater w/out treatment, Restrict land use - No daycare/hospital/school use, Restrict land use - No residential use

Types of Engineering Controls: Fences, Signs

Types of Institutional Controls: Dig Permits, Notations in Master Plan, Restrictions on Groundwater Withdrawal, Restrictions on land use, Zoning

Date in Place: 199605

Modification Date: N/A

Date Terminated: N/A

Inspecting Organization: Installation

Record of LUC: Master Plan or Equivalent

Documentation Date: N/A

LUC Enforcement: 5 Year Reviews

Contaminants: ORGANICS, PETROLEUM HYDROCARBON

Additional Information

N/A

LUC Title: Institutional Controls

Site(s): FTWW-011, FTWW-037, FTWW-038

ROD/DD Title: OPERABLE UNIT 4-ROD

Location of LUC

Institutional controls are in effect for the inactive portion of the landfill (FTWW038) and coal Storage Yard (FTWW-11) thru USARAK SOP. Active treatment is in place at the coal storage yard; the inactive portion of the landfill has been capped.

Land Use Restriction: Landfill restriction - Prohibit activities that would impact the LF cap (or cover system) and drainage system, Landfill restriction - Prohibit excavation on LF cap or cover system, Landfill restriction - Prohibit installation of utility system lines through the site, Landfill restriction - Restrict access to the site, Landfill restriction - Restrict construction of buildings that may interfere with LF cap or cover system, Landfill restriction - Restrict plantings that interfere LF cap or cover system (roots that penetrate the cap or cover system), Landfill restriction - Restrict vehicular traffic, Media specific restriction - Prohibit, or otherwise manage excavation, Media specific restriction - Prohibit, or otherwise manage excavation below a specified depth, Media specific restriction - prohibit use of groundwater for consumption or domestic purposes, Media specific restriction - restrict drinking water well installation, Media specific

Land Use Control (LUC) Summary

restriction - restrict withdrawal or use of groundwater for agricultural/irrigation purposes, Media specific restriction - restrict withdrawal or use of groundwater w/out treatment, Restrict land use - No daycare/hospital/school use, Restrict land use - No residential use

Types of Engineering Controls: Fences, Signs

Types of Institutional Controls: Dig Permits, Notations in Master Plan, Restrictions on Groundwater Withdrawal, Restrictions on land use, Zoning

Date in Place: 199706

Modification Date: N/A

Date Terminated: N/A

Inspecting Organization: Installation

Record of LUC: Master Plan or Equivalent

Documentation Date: N/A

LUC Enforcement: 5 Year Reviews

Contaminants: METALS, ORGANICS

Additional Information

N/A

LUC Title: Institutional Controls

Site(s): FTWW-003, FTWW-049, FTWW-050, FTWW-056, FTWW-057, FTWW-062, FTWW-064, FTWW-068, FTWW-073, FTWW-085, FTWW-086, FTWW-087, FTWW-089, FTWW-091, FTWW-094, FTWW-095, FTWW-096, FTWW-097, FTWW-098, FTWW-099, FTWW-100, FTWW-101

ROD/DD Title: OPERABLE UNIT 5-ROD

Location of LUC

Institutional controls are in effect for RA1A, WQFS and EQFS thru USARAK SOP. Also, ICs are in place for all two party sites without active treatment in place.

Land Use Restriction: Media specific restriction - Prohibit groundwater extraction that interferes with Remedial Action system, Media specific restriction - Prohibit, or otherwise manage excavation, Media specific restriction - Prohibit, or otherwise manage excavation below a specified depth, Media specific restriction - prohibit use of groundwater for consumption or domestic purposes, Media specific restriction - restrict drinking water well installation, Media specific restriction - restrict withdrawal or use of groundwater for agricultural/irrigation purposes, Media specific restriction - restrict withdrawal or use of groundwater w/out treatment, Restrict land use - No daycare/hospital/school use, Restrict land use - No residential use

Types of Engineering Controls: Fences, Signs

Types of Institutional Controls: Dig Permits, Notations in Master Plan, Restrictions on Groundwater Withdrawal, Restrictions on land use, Zoning

Date in Place: 199709

Modification Date: N/A

Date Terminated: N/A

Inspecting Organization: Installation

Record of LUC: Master Plan or Equivalent

Documentation Date: N/A

LUC Enforcement: 5 Year Reviews

Contaminants: ORGANICS

Additional Information

N/A

Land Use Control (LUC) Summary

LUC Title: OU 3 ESD ICs

Site(s): FTWW-055, FTWW-083, FTWW-084

ROD/DD Title: OU3 ESD

Location of LUC

FTWW-055 Birch Hill Tank Farm

FTWW-083 ROLF

FTWW-084 Fairbanks-Eielson Pipeline

Land Use Restriction: Media specific restriction - Prohibit groundwater extraction that interferes with Remedial Action system, Media specific restriction - Prohibit, or otherwise manage excavation, Media specific restriction - Prohibit, or otherwise manage excavation below a specified depth, Media specific restriction - prohibit use of groundwater for consumption or domestic purposes, Media specific restriction - restrict drinking water well installation, Media specific restriction - restrict withdrawal or use of groundwater for agricultural/irrigation purposes, Media specific restriction - restrict withdrawal or use of groundwater w/out treatment, Restrict land use - No daycare/hospital/school use, Restrict land use - No residential use

Types of Engineering Controls: Fences, Signs

Types of Institutional Controls: Dig Permits, Notations in Master Plan, Public Advisories, Restrictions on Groundwater Withdrawal, Zoning

Date in Place: 200209

Modification Date: N/A

Date Terminated: N/A

Inspecting Organization: Installation

Record of LUC: Master Plan or Equivalent

Documentation Date: N/A

LUC Enforcement: Annual Inspections, 5 Year Reviews

Contaminants: ORGANICS, PETROLEUM HYDROCARBON

Additional Information

N/A

Cleanup Program Summary

Installation Historic Activity

FWA has been used by the Department of Defense (DoD) for military operations continuously since 1938. Originally known as Ladd Army Airfield (LAAF), the post was established to test aircraft operations in arctic conditions. When war broke out with Japan in late-1941, LAAF became a critical link in the Alaska-Siberia Lend Lease route. From 1942 until the fall of 1945, American crews flew almost 8,000 aircraft to Ladd Field, where the planes were turned over to Soviet aircrews for the continued flight to the east. The planes were eventually used by the Soviets against Germany.

In 1947 the newly formed US Air Force assumed control of LAAF, which was redesignated as Ladd Air Force Base (LAFB). LAFB served as a resupply and maintenance base for the Remote Distant Early Warning sites and experimental ice stations in the Arctic Ocean. During the Korean conflict, LAFB served as part of the defense network and was the site of the first Nike Hercules Missile launch from a tactical missile site in December 1959.

On Jan. 1, 1961, the Army reassumed control of Ladd Field and renamed the installation Fort Wainwright, after General Jonathan M. Wainwright. Since that time, FWA has been home to several units, including the 171st Infantry Brigade (Mechanized), a Nike-Hercules battalion, the 172nd Infantry Brigade, and the 6th Infantry Division (Light). The major unit at FWA today is the 172nd Stryker Brigade Combat Team. Subordinate commands include the 2nd Battalion, 1st Infantry Regiment; 1st Battalion, 17th Infantry Regiment; 4th Battalion, 11th Field Artillery; 172nd Brigade Support Battalion; and the 4th Squadron, 14th Cavalry Regiment.

The major unit at FWA is the 1st Stryker Brigade Combat Team, 25th Infantry Division. Subordinate commands include 1st Battalion-5th Infantry; 1st Battalion-24th Infantry; 3rd Battalion-21st Infantry; 2nd Battalion-8th Field Artillery; 5th Squadron-1st Cavalry; 25th Support Battalion; D Company-52nd Infantry; 176th Signal Company; 73rd Engineer Company; 184th Military Intelligence Company. Additional commands include Task Force 49 which includes 1st-52nd General Support Aviation Battalion; 6th-17th Combat Arms; C Company-123rd Aviation; Headquarters and Headquarters Company Task Force 49.

As of December 2007 FWA had a total population of 14,998, including 6,341 military personnel, 7,400 dependents, and 1,257 civilians (civil service and non-appropriated fund personnel). The fort was proposed for inclusion on the CERCLA NPL in July 1989 due to releases of hazardous substances, pollutants, and contaminants into the environment. It was listed as final in August 1990. In March 1992 an FFA was signed by the USEPA Region 10, ADEC and the US Department of the Army. This agreement sets deadlines, objectives, responsibilities, and procedural framework for implementing the Installation Restoration Program (IRP) at FWA.

Installation Program Cleanup Progress

IRP

Prior Year Progress: A cleanup operations and site exit strategy (CLOSES) was applied to reduce remedial action (operation) (RA(O)) sampling requirements /frequencies. The proposed plan (PP) was completed and a ROD was signed on Jan. 29, 2014. Remedial design (RD)/RA was completed for FTWW-102.

Future Plan of Action: RD/RA for Site FTWW-102 (Taku Gardens) was completed in April 2015. FTWW-102 will continue with land use control (LUC)/ IC and groundwater monitoring until ROD levels have been achieved. Sub-slab soil-gas sampling and analyses will continue through fiscal year (FY)18 unless all agencies agree this action is no longer required. A number of sites (19) are currently under various stages of investigation (remedial investigation (RI) and site investigation (SI)) under the Alaska USCOE SI/RI contract.

MMRP

Prior Year Progress: Draft PPs will be drafted for Military Munitions Response Program (MMRP) sites FTWW-004-R-01, FTWW-002-R-01 and FTWW-001-R- 01.

Future Plan of Action: Will complete no further action (NFA) RODs on MMRP sites FTWW-004-R-01, FTWW-002-R-01 and FTWW-001- R-01. FTWW-008-R-01: Bombing range between Fort Wainwright and Fort Greely: This is a transferred range, owned primarily by the state of Alaska, comprising of 475,902.8 acres between FTWW and Fort Greely, and to the east of Fort Greely. Plan to initiate RI on this site in 2016 and complete RI in 2017.

Cleanup Program Summary

CR

Prior Year Progress: Conduct time critical remedial action (TCRA) at the Tanana River open burn (OB)/open detonation (OD) site FTWWO68.

Future Plan of Action: Complete RI at Tanana River OB/OD site FTWW068.

FORT WAINWRIGHT
Army Defense Environmental Restoration Program
Installation Restoration Program

IRP Summary

Installation Total Army Environmental Database-Restoration (AEDB-R) Sites/Closeout Sites Count: 80/50

Installation Site Types with Future and/or Underway Phases

2	Above Ground Storage Tank (FTWW-055, FTWW-096)
1	Contaminated Buildings (FTWW-011)
1	Fire/Crash Training Area (FTWW-037)
3	Landfill (FTWW-038, FTWW-067, FTWW-102)
1	Oil Water Separator (FTWW-072)
3	POL (Petroleum/Lubricants) Lines (FTWW-083, FTWW-084, FTWW-094)
4	Spill Site Area (FTWW-001, FTWW-026, FTWW-050, FTWW-101)
1	Storage Area (FTWW-047)
2	Surface Disposal Area (CC-FTWW-114, FTWW-079)
10	Underground Storage Tank (FTWW-057, FTWW-061, FTWW-063, FTWW-064, FTWW-085, FTWW-086, FTWW-087, FTWW-097, FTWW-099, FTWW-100)
2	Unexploded Munitions/Ordnance (FTWW-023, FTWW-024)

Most Widespread Contaminants of Concern

Metals, Pesticides, Petroleum, Oil and Lubricants (POL), Polychlorinated Biphenyls (PCB), Semi-volatiles (SVOC), Volatiles (VOC)

Media of Concern

Groundwater, Soil

Completed Remedial Actions (Interim Remedial Actions/ Final Remedial Actions (IRA/FRA))

Site ID	Site Name	Action	Remedy	FY
FTWW-020	POWER PLANT 2 (BLDG 1561)	FRA	WASTE REMOVAL - DRUMS, TANKS, BULK CONTAINERS	1988
FTWW-020	POWER PLANT 2 (BLDG 1561)	FRA	WASTE REMOVAL - DRUMS, TANKS, BULK CONTAINERS	1988
FTWW-024	BLAIR LAKES DISPOSAL SITE IRA		WASTE REMOVAL - DRUMS, TANKS, BULK CONTAINERS	1988
FTWW-004	DEH MAIN SHOP (BLDG 3015) IRA		WASTE REMOVAL - SOILS	1989
FTWW-004	DEH MAIN SHOP (BLDG 3015) IRA		WASTE REMOVAL - DRUMS, TANKS, BULK CONTAINERS	1989
FTWW-051	UST, BLD 3423 (269,#270)	FRA	WASTE REMOVAL - DRUMS, TANKS, BULK CONTAINERS	1989
FTWW-051	UST, BLD 3423 (269,#270)	FRA	WASTE REMOVAL - SOILS	1989
FTWW-052	UST, BLG 3015 (264, #265)	FRA	WASTE REMOVAL - SOILS	1990
FTWW-052	UST, BLG 3015 (264, #265)	IRA	WASTE REMOVAL - DRUMS, TANKS, BULK CONTAINERS	1990
FTWW-056	UST, BLDG 3481(#275,#276)	IRA	WASTE REMOVAL - SOILS	1990
FTWW-056	UST, BLDG 3481(#275,#276)	IRA	WASTE REMOVAL - DRUMS, TANKS, BULK CONTAINERS	1990

IRP Summary

Completed Remedial Actions (Interim Remedial Actions/ Final Remedial Actions (IRA/FRA))

Site ID	Site Name	Action	Remedy	FY
FTWW-057	UST, BLDG 3483(#277,#278)	IRA	WASTE REMOVAL - DRUMS, TANKS, BULK CONTAINERS	1990
FTWW-057	UST, BLDG 3483(#277,#278)	IRA	SOIL VAPOR TREATMENT	1990
FTWW-058	UST, BLDG 4057, (#303)	IRA	WASTE REMOVAL - SOILS	1990
FTWW-058	UST, BLDG 4057, (#303)	IRA	WASTE REMOVAL - DRUMS, TANKS, BULK CONTAINERS	1990
FTWW-061	UST, BLDG 5004, (UST 310)	IRA	WASTE REMOVAL - SOILS	1990
FTWW-061	UST, BLDG 5004, (UST 310)	IRA	WASTE REMOVAL - DRUMS, TANKS, BULK CONTAINERS	1990
FTWW-085	UST, BLDG 5110	IRA	WASTE REMOVAL - DRUMS, TANKS, BULK CONTAINERS	1990
FTWW-085	UST, BLDG 5110	IRA	WASTE REMOVAL - SOILS	1990
FTWW-086	UST, BLDG 3562	IRA	WASTE REMOVAL - SOILS	1990
FTWW-086	UST, BLDG 3562	IRA	WASTE REMOVAL - DRUMS, TANKS, BULK CONTAINERS	1990
FTWW-088	UST, BLDG 1060	IRA	WASTE REMOVAL - DRUMS, TANKS, BULK CONTAINERS	1990
FTWW-088	UST, BLDG 1060	IRA	WASTE REMOVAL - SOILS	1990
FTWW-089	UST, BLDG 3425	IRA	WASTE REMOVAL - SOILS	1990
FTWW-089	UST, BLDG 3425	IRA	WASTE REMOVAL - DRUMS, TANKS, BULK CONTAINERS	1990
FTWW-054	UST, BLDG 4109 (#299)	IRA	WASTE REMOVAL - DRUMS, TANKS, BULK CONTAINERS	1991
FTWW-062	UST, BLDG 1546(227,228,229,230,231,232 ,23	IRA	WASTE REMOVAL - SOILS	1991
FTWW-062	UST, BLDG 1546(227,228,229,230,231,232 ,23	IRA	WASTE REMOVAL - DRUMS, TANKS, BULK CONTAINERS	1991
FTWW-063	UST, BLDG 1514 (#221,222,223,224)	IRA	WASTE REMOVAL - DRUMS, TANKS, BULK CONTAINERS	1991
FTWW-063	UST, BLDG 1514 (#221,222,223,224)	IRA	WASTE REMOVAL - SOILS	1991
FTWW-083	RAILROAD OFF LOADING FACILITY	IRA	WASTE REMOVAL - DRUMS, TANKS, BULK CONTAINERS	1991
FTWW-098	UST, BLD 1172	IRA	WASTE REMOVAL - DRUMS, TANKS, BULK CONTAINERS	1991
FTWW-067	801 DRUM BURIAL SITE	IRA	WASTE REMOVAL - DRUMS, TANKS, BULK CONTAINERS	1992
FTWW-086	UST, BLDG 3562	IRA	WASTE REMOVAL - DRUMS, TANKS, BULK CONTAINERS	1992
FTWW-077	BLDG 1567	FRA	WASTE REMOVAL - DRUMS, TANKS, BULK CONTAINERS	1993
FTWW-079	ENGINEER PARK DRUM SITE	IRA	REMOVAL	1993
FTWW-080	DRUMS SOUTH OF LANDFILL	IRA	REMOVAL	1993
FTWW-081	NORTH POST PIPELINE BREAK -Site 3	IRA	BIOREMEDIATION	1993
FTWW-090	UST, BLDG 3479	IRA	WASTE REMOVAL - SOILS	1993
FTWW-090	UST, BLDG 3479	IRA	WASTE REMOVAL - DRUMS, TANKS, BULK CONTAINERS	1993

IRP Summary

Completed Remedial Actions (Interim Remedial Actions/ Final Remedial Actions (IRA/FRA))

Site ID	Site Name	Action	Remedy	FY
FTWW-091	DRMO POL SITES	IRA	WASTE REMOVAL - DRUMS, TANKS, BULK CONTAINERS	1993
FTWW-091	DRMO POL SITES	IRA	WASTE REMOVAL - SOILS	1993
FTWW-093	FARMER'S LOOP PERMANFROST STATION	IRA	WASTE REMOVAL - SOILS	1993
FTWW-011	POWER PLANT COAL STORAGE YARD (BLDG3595)	IRA	WASTE REMOVAL - DRUMS, TANKS, BULK CONTAINERS	1994
FTWW-057	UST, BLDG 3483(#277,#278)	FRA	SOIL VAPOR EXTRACTION	1994
FTWW-057	UST, BLDG 3483(#277,#278)	FRA	AIR SPARGING	1994
FTWW-060	UST, BLDG 4247 (#309)	FRA	WASTE REMOVAL - DRUMS, TANKS, BULK CONTAINERS	1994
FTWW-060	UST, BLDG 4247 (#309)	FRA	WASTE REMOVAL - SOILS	1994
FTWW-062	UST,BLDG 1546(227,228,229,230,231,232 ,23	FRA	AIR SPARGING	1994
FTWW-062	UST,BLDG 1546(227,228,229,230,231,232 ,23	FRA	SOIL VAPOR EXTRACTION	1994
FTWW-064	BIRCH HILL TANK FARM UST#345-350	IRA	WASTE REMOVAL - DRUMS, TANKS, BULK CONTAINERS	1994
FTWW-072	OIL WATER SEPARATOR AT BLDG 1168	IRA	WASTE REMOVAL - DRUMS, TANKS, BULK CONTAINERS	1994
FTWW-087	UST, BLDG 2111 & 2112	IRA	WASTE REMOVAL - SOILS	1994
FTWW-087	UST, BLDG 2111 & 2112	IRA	WASTE REMOVAL - DRUMS, TANKS, BULK CONTAINERS	1994
FTWW-095	UST, BLD 1002	IRA	WASTE REMOVAL - DRUMS, TANKS, BULK CONTAINERS	1994
FTWW-097	UST, BLD 1168	IRA	WASTE REMOVAL - DRUMS, TANKS, BULK CONTAINERS	1994
FTWW-099	UST, BLD 3564	IRA	WASTE REMOVAL - DRUMS, TANKS, BULK CONTAINERS	1994
FTWW-100	BLD 2250 residual POL contamination	IRA	WASTE REMOVAL - SOILS	1994
FTWW-100	BLD 2250 residual POL contamination	IRA	WASTE REMOVAL - DRUMS, TANKS, BULK CONTAINERS	1994
FTWW-049	CONTAMINATED SOIL PILE(POWER PLANT)	FRA	INCINERATION	1995
FTWW-072	OIL WATER SEPARATOR AT BLDG 1168	FRA	AIR SPARGING	1995
FTWW-072	OIL WATER SEPARATOR AT BLDG 1168	FRA	NATURAL ATTENUATION	1995
FTWW-072	OIL WATER SEPARATOR AT BLDG 1168	FRA	SOIL VAPOR EXTRACTION	1995
FTWW-073	NIKE SITES B & C CLEANUP	FRA	WASTE REMOVAL - SOILS	1995
FTWW-095	UST, BLD 1002	FRA	SOIL VAPOR EXTRACTION	1995
FTWW-095	UST, BLD 1002	FRA	AIR SPARGING	1995
FTWW-100	BLD 2250 residual POL contamination	FRA	SOIL VAPOR EXTRACTION	1995
FTWW-100	BLD 2250 residual POL contamination	FRA	AIR SPARGING	1995
FTWW-037	FIRE FIGHTING TRAINING AREA	FRA	WASTE REMOVAL - SOILS	1996

IRP Summary

Completed Remedial Actions (Interim Remedial Actions/ Final Remedial Actions (IRA/FRA))

Site ID	Site Name	Action	Remedy	FY
FTWW-050	NORTH POST SITE	FRA	SOIL VAPOR EXTRACTION	1996
FTWW-050	NORTH POST SITE	FRA	AIR SPARGING	1996
FTWW-055	FAIRBANKS FUEL TERMINAL	FRA	FENCE OR OTHER SITE ACCESS CONTROL MEASURES	1996
FTWW-055	FAIRBANKS FUEL TERMINAL	IRA	ALTERNATE WATER SUPPLY/WATER SUPPLY TREATMENT	1996
FTWW-056	UST, BLDG 3481(#275,#276)	FRA	NATURAL ATTENUATION	1996
FTWW-067	801 DRUM BURIAL SITE	IRA	WASTE REMOVAL - DRUMS, TANKS, BULK CONTAINERS	1996
FTWW-082	CHEMICAL AGENT DUMP SITE	IRA	FENCE OR OTHER SITE ACCESS CONTROL MEASURES	1996
FTWW-085	UST, BLDG 5110	FRA	OTHER	1996
FTWW-085	UST, BLDG 5110	IRA	LANDFARMING	1996
FTWW-086	UST, BLDG 3562	FRA	AIR SPARGING	1996
FTWW-086	UST, BLDG 3562	FRA	NATURAL ATTENUATION	1996
FTWW-086	UST, BLDG 3562	FRA	OTHER	1996
FTWW-086	UST, BLDG 3562	FRA	SOIL VAPOR EXTRACTION	1996
FTWW-086	UST, BLDG 3562	FRA	INSTITUTIONAL CONTROLS	1996
FTWW-087	UST, BLDG 2111 & 2112	FRA	AIR SPARGING	1996
FTWW-099	UST, BLD 3564	FRA	AIR SPARGING	1996
FTWW-099	UST, BLD 3564	FRA	SOIL VAPOR EXTRACTION	1996
FTWW-003	AIRCRAFT MAIN (BLDG 2077)	FRA	AIR SPARGING	1997
FTWW-003	AIRCRAFT MAIN (BLDG 2077)	FRA	SOIL VAPOR EXTRACTION	1997
FTWW-011	POWER PLANT COAL STORAGE YARD (BLDG3595)	FRA	AIR SPARGING	1997
FTWW-011	POWER PLANT COAL STORAGE YARD (BLDG3595)	FRA	FENCE OR OTHER SITE ACCESS CONTROL MEASURES	1997
FTWW-011	POWER PLANT COAL STORAGE YARD (BLDG3595)	FRA	SOIL VAPOR EXTRACTION	1997
FTWW-011	POWER PLANT COAL STORAGE YARD (BLDG3595)	FRA	NATURAL ATTENUATION	1997
FTWW-038	FT. WAINWRIGHT LANDFILL PLUME	FRA	CAPPING	1997
FTWW-038	FT. WAINWRIGHT LANDFILL PLUME	FRA	NATURAL ATTENUATION	1997
FTWW-038	FT. WAINWRIGHT LANDFILL PLUME	FRA	FENCE OR OTHER SITE ACCESS CONTROL MEASURES	1997
FTWW-047	DRMO SALVAGE YARD	FRA	FENCE OR OTHER SITE ACCESS CONTROL MEASURES	1997
FTWW-047	DRMO SALVAGE YARD	FRA	FENCE OR OTHER SITE ACCESS CONTROL MEASURES	1997
FTWW-055	FAIRBANKS FUEL TERMINAL	FRA	AIR SPARGING	1997
FTWW-055	FAIRBANKS FUEL TERMINAL	FRA	SOIL VAPOR EXTRACTION	1997
FTWW-055	FAIRBANKS FUEL TERMINAL	FRA	NATURAL ATTENUATION	1997
FTWW-067	801 DRUM BURIAL SITE	IRA	LANDFARMING	1997
FTWW-084	FEP Milepost 2.7 and 3.0	IRA	AIR SPARGING	1997
FTWW-084	FEP Milepost 2.7 and 3.0	IRA	SOIL VAPOR EXTRACTION	1997
FTWW-084	FEP Milepost 2.7 and 3.0	FRA	FREE PRODUCT RECOVERY	1997

IRP Summary

Completed Remedial Actions (Interim Remedial Actions/ Final Remedial Actions (IRA/FRA))

Site ID	Site Name	Action	Remedy	FY
FTWW-085	UST, BLDG 5110	FRA	NATURAL ATTENUATION	1997
FTWW-089	UST, BLDG 3425	IRA	EX SITU SOIL TREATMENT	1997
FTWW-047	DRMO SALVAGE YARD	FRA	NATURAL ATTENUATION	1998
FTWW-047	DRMO SALVAGE YARD	FRA	AIR SPARGING	1998
FTWW-047	DRMO SALVAGE YARD	FRA	SOIL VAPOR EXTRACTION	1998
FTWW-047	DRMO SALVAGE YARD	FRA	EX SITU SOIL TREATMENT	1998
FTWW-047	DRMO SALVAGE YARD	FRA	FENCE OR OTHER SITE ACCESS CONTROL MEASURES	1998
FTWW-067	801 DRUM BURIAL SITE	FRA	OTHER	1998
FTWW-067	801 DRUM BURIAL SITE	IRA	WASTE REMOVAL - SOILS	1998
FTWW-083	RAILROAD OFF LOADING FACILITY	FRA	SOIL VAPOR EXTRACTION	1998
FTWW-083	RAILROAD OFF LOADING FACILITY	FRA	NATURAL ATTENUATION	1998
FTWW-083	RAILROAD OFF LOADING FACILITY	FRA	AIR SPARGING	1998
FTWW-094	FORMER QRTMASTER'S FUELING SYS-EAST/WEST	IRA	CHEMICAL REDUCTION/OXIDATION	1998
FTWW-094	FORMER QRTMASTER'S FUELING SYS-EAST/WEST	IRA	REMOVAL	1998
FTWW-083	RAILROAD OFF LOADING FACILITY	IRA	FREE PRODUCT RECOVERY	1999
FTWW-094	FORMER QRTMASTER'S FUELING SYS-EAST/WEST	FRA	INSTITUTIONAL CONTROLS	1999
FTWW-094	FORMER QRTMASTER'S FUELING SYS-EAST/WEST	FRA	NATURAL ATTENUATION	1999
FTWW-067	801 DRUM BURIAL SITE	FRA	FENCE OR OTHER SITE ACCESS CONTROL MEASURES	2000
FTWW-084	FEP Milepost 2.7 and 3.0	FRA	EX SITU SOIL TREATMENT	2000
FTWW-094	FORMER QRTMASTER'S FUELING SYS-EAST/WEST	FRA	THERMALLY ENHANCED SVE	2000
FTWW-094	FORMER QRTMASTER'S FUELING SYS-EAST/WEST	FRA	FENCE OR OTHER SITE ACCESS CONTROL MEASURES	2000
FTWW-055	FAIRBANKS FUEL TERMINAL	FRA	FREE PRODUCT RECOVERY	2001
FTWW-067	801 DRUM BURIAL SITE	FRA	WASTE REMOVAL - SOILS	2001
FTWW-094	FORMER QRTMASTER'S FUELING SYS-EAST/WEST	FRA	SOIL VAPOR EXTRACTION	2001
FTWW-094	FORMER QRTMASTER'S FUELING SYS-EAST/WEST	FRA	AIR SPARGING	2001
FTWW-097	UST, BLD 1168	FRA	BIOVENTING	2001
FTWW-097	UST, BLD 1168	FRA	AIR SPARGING	2001
FTWW-083	RAILROAD OFF LOADING FACILITY	FRA	FENCE OR OTHER SITE ACCESS CONTROL MEASURES	2003
FTWW-003	AIRCRAFT MAIN (BLDG 2077)	FRA	REMOVAL	2004
FTWW-101	NEELY ROAD POL POINT Bldg 3570	FRA	BIOREMEDIATION - IN SITU	2005
FTWW-101	NEELY ROAD POL POINT Bldg 3570	FRA	SOIL VAPOR EXTRACTION	2005
FTWW-101	NEELY ROAD POL POINT Bldg 3570	FRA	AIR SPARGING	2005

IRP Summary

Completed Remedial Actions (Interim Remedial Actions/ Final Remedial Actions (IRA/FRA))

Site ID	Site Name	Action	Remedy	FY
FTWW-096	BIRCH HILL ABOVE GROUND STORAGE TANKS	FRA	FENCE OR OTHER SITE ACCESS CONTROL MEASURES	2007
FTWW-100	BLD 2250 residual POL contamination	FRA	NATURAL ATTENUATION	2009
FTWW-050	NORTH POST SITE	FRA	NATURAL ATTENUATION	2013
FTWW-050	NORTH POST SITE	FRA	INSTITUTIONAL CONTROLS	2013
FTWW-102	FORMER COMMUNICATION SITE	IRA	REMOVAL	2013
FTWW-102	FORMER COMMUNICATION SITE	FRA	INSTITUTIONAL CONTROLS	2016

Duration of IRP

Date of IRP Inception: 198101

Estimated Date for Remedy-In-Place (RIP)/Response Complete (RC): 201611/204510

Date of IRP completion including Long Term Management (LTM): 204510

IRP Contamination Assessment

Contamination Assessment Overview

An RA(O) and eight sites are in LTM. All known sites have been evaluated and 59 sites have been closed or considered no further remedial action planned (NFRAP). The remaining active sites have been investigated under various OUs or a signed two-party agreement that covers POL sources.

In July 1989, due to the release of hazardous substances, pollutants, and contaminants into the environment, FWA was proposed for placement on the CERCLA NPL. The Army's investigation of contaminated sites at FWA under the IRP began in 1989, and the post was added to the CERCLA NPL in 1990. The USEPA Region 10 and the ADEC began working closely with the Army to better understand the nature and extent of contamination at FWA and its threat to human health and the environment. The three parties negotiated the Fort Wainwright NPL Site FFA, which was signed in 1992, and the Army and ADEC also entered into a two-party agreement to address POL sites in 1992.

Attachment 1 to the FFA describes the investigation and restoration approach agreed upon by the Army and the regulatory agency which were party to the agreement. As of the signing of the FFA, 41 potential contaminant source areas were identified as warranting inclusion into OUs and 57 POL sources were identified through previous studies, reports and interviews. NFA was planned for 27 potential source areas based on the screening criteria outlined by the restoration project managers. The history of the contamination and remediation of source areas are summarized in the site histories in this report.

In FY99, an independent technical review (ITR) was conducted at FWA, focusing on the three source areas associated with OU 3 (FTWW-055, Fairbanks Fuel Terminal; FTWW-083, the Railroad Off-Loading Facility; and FTWW-084, the Fairbanks-Eielson Pipeline Spills). The final report from this ITR indicated that the RAs underway were correct, adequate, and the most cost efficient ways to reach cleanup goals. An ESD was signed in September 2001 addressing the additional costs and recommended action.

Petroleum persistence remains a topic of negotiation in closing sites in Alaska. The Army continues to work with the state of Alaska to minimize monitoring requirements and close sites with persistent remaining petroleum contamination that poses no risk. Three five-year reviews have now been completed for FWA in 2001, 2006, and 2011.

In 2005, FTWW-102 was added as a new site when high concentrations of PCBs were discovered during housing construction. A preliminary site evaluation began in 2005 and removal of some PCB-contaminated soils was completed that year. US Army Garrison Alaska, the state of Alaska, and the USEPA established OU6 in 2007 to continue to address the issues of FTWW-102. The site is in the RI phase through 2009. Houses were constructed, but will remain unoccupied until an agreement is reached by the Army, the USEPA, and the state of Alaska.

The RI was completed in March 2010 and the feasibility study (FS) was completed in December 2011. The PP 30-day public comment period was scheduled for August 2011. A ROD was signed in January 2014. The RD/RA was completed in June 2014 and signed in June 2015.

Fort Wainwright is in the process of trying to establish OU7 to address issues of a newly discovered OB/OD site along the Tanana River within the Small Arms Complex.

Cleanup Exit Strategy

FWA continues to work toward the closure of sites by evaluating system operations data, monitoring results, and other changes in site and field conditions on a semiannual basis. These results are discussed with the regulators and agreements are reached as to reductions in system operations, decreases in monitoring parameters and quantities.

The Army has adopted the CLOSES format as a way to evaluate sites and determine the next step, if there are any data gaps, whether continued operations are warranted, if reduced monitoring is feasible, or if the site is ready for closure. This model was presented at the Defense Environmental Restoration Account [DERA - currently called Environmental Restoration, Army (ER,A)] conference in November 2004 as an easily adaptable formula which can result in significant cost savings.

The Army will continue to use these methods to ramp-down cleanup operations at FWA. The installation will continue to track LUC/ICs using a geographic information system (GIS) database and implement the IC policy to prevent accidental exposure to contaminants.

Treatment systems and monitoring wells that are no longer needed will be decommissioned.

IRP Previous Studies

Year	Title	Author	Date
1983	Installation Assessment of Ft. Richardson and Sub-installations: Ft. Greely and Ft. Wainwright, Operable Unit 1	Env. Science & Eng.	SEP-1983
1986	Ft. Richardson and Fort Wainwright Monitoring Wells 1985, 1986, and 1987	Env. Science & Eng.	FEB-1986
	Endangerment Assessment for FTW 150 Unit Family Housing Project-Data Acquisition Plan, OU2	URS Corporation	OCT-1986
	Side Scan Sonar Survey and Diver Inspection of Blair Lakes, Blair Lakes, Tanana Flats, Operable Unit 1	Northern Tech. Svcs	NOV-1986
	Blair Lakes Drum Mapping and Sample Analysis, Blair Lakes, Ft. Wainwright, OU1	URS Corporation	DEC-1986
1987	Confirmation Study: Endangerment Assessment for FTW Family Housing Area, Executive Summary, OU2	URS Corporation	APR-1987
	Confirmation Study: Endangerment Assessment for FTW Family Housing Area, Volume 1 of 2	URS Corporation, OU2	APR-1987
	FTW River Road Drum Site Survey Findings, OU1	Harding Lawson Assoc.	SEP-1987
1988	Risk Assessment for Proposed Family Housing Facilities, OU2	Ecology & Environment	NOV-1988
1989	Groundwater Monitoring Landfill Plume, QA Report and Chemical Analysis, OU4	Corps of Engineers, AK. Dist.	OCT-1989
	Fairbanks-Eielson POL Pipeline Soil Gas Survey, MAPCO Refinery, Eielson AFB, OU3	Hart Crowser	DEC-1989
1990	Ft. Wainwright Landfill Workplan, OU4	Ecology & Environment	FEB-1990
	US Army IRP, The North Post Site, FTW, Environmental Assessment, OU2	Corps of Engineers, AK. Dist	MAY-1990
1991	Work Plan for the Remediation of Contaminated Soil Stockpiles, OU5	Ecology & Environment	MAR-1991
	Final FI Plan for the confirmation of Fire Training Pits, OU4	Ecology & Environment	APR-1991
	Design Analysis for Soil Remediation Project at North Post, OU2	Ecology & Environment	MAY-1991
	Ft. Wainwright Landfill Report, OU4	Ecology & Environment	JUN-1991
	Final Report, Power Plan Coal Yard	Corps of Engineers, Ak. Dist.	JUL-1991
	Results of Chemical Analyses for FTW Fire Training Pits, OU4	Corps of Engineers, Ak. Dist.	AUG-1991
	Project Report for Soil Sampling and Building Demolition Bldg. #1567, OU1	OHM Remed. Svcs	AUG-1991
	Fairbanks Fuel Terminal, Part I, Sampling/Analysis, QA/QC Plan, OU3	Ecology & Environment	AUG-1991
	Hydrogeology at the Fairbanks Fuel Terminal, OU3	Ecology & Environment	SEP-1991
	Solid Waste Management Plan, Preliminary Source Evaluation, OU2	Harding Lawson Assoc.	OCT-1991

IRP Previous Studies

1991	Title	Author	Date
	Chemical Data Acquisition Plan, Fairbanks Fuel Terminal, MAPCO Refinery, OU3	Ecology & Environment	NOV-1991
1992	Fairbanks Fuel Terminal Work Plan Part I Sampling Analysis Plan, OU3	Ecology & Environment	JAN-1992
	Records Search, Preliminary Source Evaluation, OU1	Harding Lawson Assoc.	FEB-1992
	Progress Report for the Confirmation of Fire Training Pits, OU4	Ecology & Environment	FEB-1992
	Work Plan Documents, Birch Hill UST Site, OU5	Ecology & Environment	APR-1992
	Compliance Agreement between the ADEC and the US Army, 6th Infantry Division, Alaska Department of Environmental Conservation, Apr-92Work Plan, OU2, PSE2, Phase 1	Harding Lawson Assoc.	MAY-1992
	Ground Penetrating Radar Studies, FTW Hazardous Materials Site, 30 March - 17 April 1992, Preliminary Report	US Army Cold Regions Research Engineering Lab	MAY-1992
	Draft IRP Conceptual Model for OU3: Fairbanks Fuel Terminal, Rail Off-Loading Facility, Fairbanks-Eielson Pipeline, OU3	Corps of Engineers, Ak. Dist.	MAY-1992
	Groundwater Monitoring Network	Alaska District Corps of Engineers	AUG-1992
	Work Plan, DRMO, OU2, PSE2, Phase 2, 2 Vols.	Harding Lawson Assoc.	SEP-1992
	Draft Potential Interim Remedial Actions, OU3	Ecology & Environment	SEP-1992
	Analysis of Radar Profiles for Chemical Waste Sites, OU2	US Army Cold Regions Research Engineering Lab	OCT-1992
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	Sample Results for 1999, Bldgs 2250, 1168 and 1002, 2 Party Sites	ENSR Consulting and Engineering	DEC-2000
	Final Operations, Maintenance and Monitoring for Operable Unit 1, 801 Drum Burial Site treatment system	ENSR Consulting and Engineering	DEC-2000
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Tech Memo: DRMO-1 Treatment System Expansion 35%, OU2	Northwind	JUN-2002
Tech Memo: DRMO-5 Treatment System Expansion 35%, OU2	Northwind	JUN-2002

IRP Previous Studies

2002

Title	Author	Date
Project Schedule for Horizontal Well Optimization, Indoor Air @ 1060, Updated QAPP	Northwind	JUN-2002
G/W Contaminant Data Collection & Trend Analysis Work Plan	Northwind	JUN-2002
WQFS Sub-Area 3 & Bldg 1060W Remediation Systems 2001 Annual Report	Northwind	JUN-2002
WQFS1/WQFS2 Post Construction Report, OU5, FWA	Northwind	JUN-2002
Project Schedule for Source Area Remediation System Refractory Lining Repair	Northwind	AUG-2002
Bldg 2077, Contaminated Soil Removal, Comments & Work Plan	Swaim/FES	AUG-2002
Bldg 2111/2112 Raw Data Report	ASCI/NANA	AUG-2002
Indoor Air Monitoring, Building 1060W	Northwind	AUG-2002
Tech Memo: Probe Sampling & Analysis DRMO-4 Sub Area, OU2	Northwind	SEP-2002
Tech Memo: Soil Vapor Extraction Well Sampling 3-Party AS/SVE Treatment System DRMO Yard, OU2	Northwind	SEP-2002
Final IRAR, OU3	FES	SEP-2002
CSY Spring 2002 Raw Data Report , OU4	ASCI/NANA	SEP-2002
Final Groundwater Contamination Data Collection Work Plan & SSHP	Northwind	OCT-2002
AS/SVE OM&M Project Schedule OU5	Northwind	NOV-2002
FWA Groundwater Sampling Program 2002 Report	CH2M Hill	NOV-2002
2002 Interim Remedial Action Report September 2002	CH2M Hill	NOV-2002
Soil Boring Installation Action Report for Coal Storage Yard, November 2002, OU4	Northwind	NOV-2002
Field Notes for GW and soil sampling at Landfill and CSY Sept/October 2002, OU4	Northwind	NOV-2002
Former Buildings 1128, 1129, and 1130 Investigation, OU3	FES	NOV-2002
Work Plan for GW Monitoring and Data Analysis at the CSY October 2002, OU4	Northwind	NOV-2002
Work Plan for GW Monitoring and Data Analysis at the Landfill Source Area, OU4	Northwind	NOV-2002
Source Area Treatability Study, 2001 Annual Report, OU5	CH2M Hill	DEC-2002
Tech Memo: 2002 Report for Bldg 2077 Additional Sampling	ENSR	DEC-2002
Tech Memo - Groundwater Well Installations, Bldg 1002	ENSR	DEC-2002

2003

2003 Work Plan, Operable Unit 3, Fort Wainwright Alaska dated Nov 2002	FES	JAN-2003
OM&M Manual, Birch Hill Tank Farm Product Recovery System (addendum to 2001) dated Nov 2002, OU3	FES	JAN-2003
Tech Memo: Fall 2003 Sampling Data Report, OU3	FES	JAN-2003
Sampling Data Report: Fall Sampling at OU4 Landfill December 2002, OU4	Northwind	JAN-2003

IRP Previous Studies

2003

Title	Author	Date
FINAL Sparge Curtain Source Area & Horizontal Well Remediation System 2001 Annual Rpt	Northwind	JAN-2003
Final Source Area Treatability Study, 2001 Annual Report	CH2	JAN-2003
Investigated Derived Waste Report OU4 Landfill September-October 2002, OU4	Northwind	JAN-2003
Investigated Derived Waste Report OU4 Coal Storage Yard September 2002, OU4	Northwind	JAN-2003
FINAL Area-wide Community Involvement Plan, January 2003	ENSR	JAN-2003
IDW Report Coal Storage Yard, September 2002, OU4	Northwind	FEB-2003
IDW Report Landfill, September-October 2002, OU4	Northwind	FEB-2003
Work Plan for Confirmation Soil Sampling, Phyto Study Site Closure, January 2003, OU1	Swaim	FEB-2003
Tech Memo: Level Survey of Soil & G/W monitoring points at DRMO Yard, OU2	Northwind	MAR-2003
Final 2002 Sediment Quality Monitoring Program, Chena River Aqua Asmt Prog, FWA	CH2M Hill	APR-2003
Final SSHP & QAPP for 801 Drum Burial Site GW Monitoring, FWA , OU1	ENSR	MAY-2003
2002 Monitoring Report, OU3	FES	MAY-2003
Final Work Plan for Groundwater Monitoring and Data Analysis at Landfill October 2002, OU4	Northwind	MAY-2003
Bldgs 2111/2 Operations, Maintenance & Monitoring 2003 Work Plan	ENSR	MAY-2003
Operations, Maintenance & Monitoring Manual: Bldgs 2111/1 Treatment Systems	ENSR	MAY-2003
Proposed Spring 2002 soil boring locations 2111/2112, FWA	ASCI/NANA	MAY-2003
OU5 WQFS CLOSES Evaluation	CH2M Hill	MAY-2003
Fort Wainwright Geohydrologic Network Status Report 1998 through 2002	ENSR	JUN-2003
FINAL Monitoring Report, 2002 Treatment System, Bldgs 2111/2 FWA	ENSR	JUN-2003
FINAL Long-Term Monitoring Plan, Bldg 1002, et. Al.	ENSR	JUN-2003
FINAL OU5 Quality Assurance Program Plan	Northwind	JUN-2003
MP 2.7 and 3.0 Treatment Cell Decommissioning and Sampling Plan Jan 2003, OU3	FES	JUN-2003
FINAL Operations, Maintenance & Monitoring Work Plan for 2077, Bldg 2077, et al	ENSR	JUN-2003
Tech Memo: Installation of Monitoring Wells at the North Post Site, FWA	CH2M Hill	JUN-2003
Tech Memo Groundwater Probe Sampling and Analysis, DRMO-4 Sub-area Sept 2002, OU2	Northwind	JUN-2003
Operable Unit 3 Spring 2003 EDF, EDCC files, tech memo, sampling results, chain of custody forms	FES	JUN-2003
Tech Memo SVE Well Sampling, 3-Party AS/SVE System, September 2002, OU2	Northwind	JUN-2003
Tech Memo: DRMO-1 Historical Data Review, OU2	Northwind	JUL-2003
Annual Report Addendum, Operable Unit 2, dated May	Northwind	JUL-2003

IRP Previous Studies

2003

Title	Author	Date
27, 2003, OU2		
2003 Work Plan, Operable Unit 3, Fort Wainwright, Alaska dated June 2003	FES	JUL-2003
Final Decommissioning and Removal of 3 Treatment Systems Work Plan dated June 2003, 1168, 1002 & 3483	ENSR	JUL-2003
Long-Term Monitoring Plan for FWA Two-Party Sites dated June 2003	ENSR	JUL-2003
Final 2003 Treatment and Monitoring Operations Work Plan, OU2 dated August 2003	Northwind	AUG-2003
Final Groundwater Monitoring and Data Analysis at the Landfill Source Area Work Plan, OU4	Northwind	AUG-2003
Final Groundwater Monitoring and Data Analysis at the Coal Storage Yard Source Area Work Plan, OU4	Northwind	AUG-2003
Draft 2003 Annual Groundwater Monitoring, 801 Drum Burial Site	ENSR	AUG-2003
Draft Bldg 2077 Contaminated Soil Removal Work Plan	Swaim	SEP-2003
Draft Bldg 2077 Contaminated Soil Removal Environmental Protection Plan	Swaim	SEP-2003
Draft Bldg 2077 Contaminated Soil Removal Sampling and Analysis Plan Amendment	Swaim	SEP-2003
Draft Decommissioning Monitoring Wells at FWA and FRA Work Plan	Shannon & Wilson	SEP-2003
Draft OU5 Annual Report, March 2002-February 2003	Northwind	SEP-2003
Final Work Plan Addendum for Decommissioning of the Bldg 1168 (3Party) Site	ENSR	SEP-2003
Building 2077 Contaminated Soil Removal Environmental Protection Plan	Swaim	SEP-2003
Draft Bldg 2077 Contaminated Soil Removal Site Specific Safety and Health Plan	Swaim	SEP-2003
Fort Wainwright Groundwater Monitoring Program 2003 Report	CH2M Hill	OCT-2003
Technical Memorandum, North Post Site Review	CH2M Hill	OCT-2003
Final Management Plan, Decommissioning Monitoring Wells FWA	FRA, Shannon & Wilson	OCT-2003
Final 2002 Annual Report, Operable Unit 2	Northwind	OCT-2003
Draft 2004 Treatment and Monitoring Operations Work Plan OU2	Northwind	OCT-2003
Building 2077 Contaminated Soil Removal Work Plan	Swaim	OCT-2003
Building 2077 Contaminated Soil Removal Preliminary Lab Analysis Backfill Material Report	Swaim	OCT-2003
Building 2077 Contaminated Soil Removal Site Safety and Health Plan	Swaim	OCT-2003
Draft System Decommissioning at Bldgs 1168, 1002, and 3483	ENSR	OCT-2003
Sampling Data Report Fall 2003, OU4 Coal Storage Yard	Northwind	NOV-2003
Sampling Data Report Fall 2003, Landfill	Northwind	NOV-2003
Investigative-Derived Waste Report for the OU4 Landfill, September 2003 GW event	Northwind	NOV-2003

IRP Previous Studies

2003

Title	Author	Date
Investigative-Derived Waste Report for the OU4 CSY Sept-Oct 2003 Well Decom and GW event	Northwind	NOV-2003
Draft Tech Memo: DRMO Yard GW Trichloroethene/Tetrachloroethene Concentration Trend Analysis	Northwind	NOV-2003
Draft CLOSES Evaluation, DRMO Yard	CH2M Hill	NOV-2003
Neely Road POL Site Release Investigation Final Report	ENSR	DEC-2003
Draft Tech Memo - Results of Indoor Air Monitoring at Building 1060	Northwind	DEC-2003
Sampling Data Report for Bldgs 2111/2112 Site GW Monitoring and Soil Borings	ENSR	DEC-2003
Draft Work Plan Addendum, Bldgs 1002, 1168, 2250, 2077 and Neely Road	ENSR	DEC-2003
Draft Investigation of Fuel Contamination at Neely Road and Bldg 2250 LIF	COE	DEC-2003
Well Decommissioning Letter Report for CSY, OU4,	Northwind	DEC-2003
Well Repair Letter Report for Landfill, OU4	Northwind	DEC-2003
Draft CSY Remediation System Decommissioning Work Plan, OU4	Northwind	DEC-2003
CDQR Fall 2003 GW Monitoring at the Landfill, OU4	COE	DEC-2003
CDQR Fall 2003 GW Monitoring at the CSY, OU4	COE	DEC-2003
Final Tech Memo - Flow Meter Replacement DRMO 3-Party AS/SVE Treatment System	Northwind	DEC-2003

2004

Replacement Cover - 2002 Status Report for Bldgs 1002, 1168, and 2250	ENSR	JAN-2004
Revised Draft 2003 Annual GW Monitoring Report 801 Drum Burial Site	ENSR	JAN-2004
Draft 2004 OU3 Work Plan	FES	JAN-2004
Draft CLOSES Evaluation, 801 Drum Burial Site FWA	CH2M Hill	JAN-2004
Final CLOSES Evaluation Bldg 1168 Site, FWA	CH2M Hill	JAN-2004
Annual Report: VOC Emission Tracking Program for 2003 IRP Treatment Systems FWA	ENSR	JAN-2004
2003 Operation, Maintenance and Monitoring Report Bldgs 1002, 1168, 2250 and 2077 FWA	ENSR	JAN-2004
CD ONLY: 2003 Fall Groundwater Sampling Event, EDF corrected files dated	FES	JAN-2004
Draft 2003 Landfill Annual Report, OU4, FWA	Northwind	FEB-2004
Draft 2003 Operation, Maintenance and Monitoring Report for Buildings 2111/2112, FWA	ENSR	FEB-2004
Draft 2003 Coal Storage Yard Annual Report, OU4, FWA	Northwind	FEB-2004
Tech Memo: Documentation of OU3 FEFLOW Model, FWA	CH2M Hill	FEB-2004
Horizontal Well Remediation System AS Probe Monitoring Report, OU5 FWA	Northwind	FEB-2004
Draft 2003 OU2 Annual Monitoring Report, FWA	Northwind	MAR-2004

IRP Previous Studies

2004

Title	Author	Date
Draft Removal Action Report Building 2077 Contaminated Soil Removal FWA	Coe-Swaim-FES	MAR-2004
Draft Remedial Action Report for POL Source Removal FWA	BNCI	MAR-2004
Final 2004 Treatment and Monitoring Operations Work Plan	Northwind	MAR-2004
Draft Investigative-Derived Waste Management Area 2003 Annual Report	Northwind	MAR-2004
Final Technical Memorandum Results of Indoor Air Monitoring at Building 1060	Northwind	MAR-2004
Final CLOSES Evaluation DRMO Yard, FWA	CH2M Hill	MAR-2004
Draft CD CLOSES Evaluation Building 2250 FWA	CH2M Hill	MAR-2004
Draft CD CLOSES Evaluation North Post FWA	CH2M Hill	MAR-2004
Final 2003 OU3 Annual Monitoring Report	FES	MAR-2004
Final Coal Storage Yard Remediation System Decommissioning Work Plan	COE-Northwind	MAR-2004
Final 2004 Work Plan OU3, FWA	FES	MAR-2004
Final CLOSES Evaluation 801 Drum Site, FWA	CH2M Hill	APR-2004
Draft 2004 Work Plan for POL Source Removal, FWA	COE- BNCI	APR-2004
Final Report Treat System Decom Bldgs 1168, 1002, and 3483	COE-ENSR	APR-2004
Sampling Data Report for Bldgs 2111/2112 Site GW Monitoring	COE-ENSR	APR-2004
Draft Remedial Action Report for POL Source Removal	COE-BNCI	APR-2004
Final 2003 OM&M Report for Bldgs 2111/2112	COE-ENSR	MAY-2004
Draft Bldg 2062 and Former Bldg 2063 Site Closure Plan	COE-Hart Crowser	MAY-2004
Draft Bldg 2060 Closure Plan dated May 2004	COE-Hart Crowser	MAY-2004
EDMS Deliverable for Spring 2004 Bldgs 2111/2112	COE	JUN-2004
Final CLOSES Evaluation MP 3.0	CH2M Hill	JUN-2004
Final CLOSES Evaluation MP 2.7	CH2M Hill	JUN-2004
Final CLOSES Evaluation North Post Site	CH2M Hill	JUN-2004
Draft 2004 Work Plan for Treatment/Monitoring Activities Bldgs 1002, 1168, 2250, 2077 and Neely Road	COE-ENSR	DEC-2004
Birch Hill UST Site Draft Remedial Investigation	Ecology and Environment	DEC-2004
Tech Memo: Groundwater Monitoring, Bldgs 1172, 3425, 3481, 5110	Alaska District Corps of Engineers	DEC-2004
Final, Status Report and Respiration Testing, Bldg 2077	ENSR	DEC-2004
Final, Status Report and Respiration Testing, Bldgs 1002, 1168 and 2250	ENSR	DEC-2004
Technical Memorandum, Summer 2003 Sampling Data Report, OU3	FES	DEC-2004
2003 Fall Groundwater Sampling Event OU3 EDF files,	FES	DEC-2004

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2004

Title	Author	Date
EDMS files		
Tech Memo: Sampling Data Report OU3 2004 Winter Groundwater Sampling Event	FES	DEC-2004
Tech Memo: Sampling Data Report OU3 2004 Winter Groundwater Sampling Event EDF and Draft EDMS	FES	DEC-2004
Final LIF Investigation Neely Road and Bldg 2250	COE	DEC-2004
Sampling Data Report, OU3 Spring Sampling Event 2004	COE-FES	DEC-2004
EDF and draft EDMS deliverables: Sampling Data Report, OU3 Spring Sampling Event 2004	COE-FES	DEC-2004
Draft CLOSES Report Bldg 5110	CH2M Hill	DEC-2004
Draft 2004 Landfill Work Plan, SAP, QAPP, HSP	FES	DEC-2004
Final 2003 Annual Groundwater Monitoring, 801 Drum Burial Site	COE-ENSR	DEC-2004
Draft 2004 Work Plan Addendum OM&M for Bldgs 2111/2112	COE-ENSR	DEC-2004

2005

2004 Operation, Maintenance and Monitoring Report, BLDG 1002, 1168, 2250 and 2077, and Neely Road POL Site	ENSR	JAN-2005
2004 Sampling Report Two-Party Sites Former BLDG 3564, North Post, Former BLDG 2060, and BLDG 2062/Former BLDG 2063	FES	JAN-2005
2004 Sampling Report for Two-Party Sites	USACE	JAN-2005
Annual Report VOC Emission Tracking Program for 2004 IRP Treatment System	ENSR	JAN-2005
Geologic Setting of the Birch Hill Tank Farm, OU3	CRREL	JAN-2005
FINAL OU5 Annual Report March 2002 to February 2003	Northwind	FEB-2005
DRAFT Investigation of Fuel Contamination at the BLDG 2250 Site Using Laser-Induced Fluorescence Probing Technology	USACE	MAR-2005
2005 Quality Assurance Project Plan Addendum 801 Drum Burial Site OU1	ENSR	MAR-2005
2005 OU3 Work Plan	USACE	MAR-2005
DRAFT Final Horizontal Well Remediation System Operation, Maintenance, and Monitoring Manual OU5	Northwind	MAR-2005
FINAL Work Plan Addendum 2005 Operation, Maintenance and Monitoring for BLDG 2111/2112	ENSR	APR-2005
Technical Memorandum Decommissioning of Valve Pit B and Valve Pit C Treatment Systems	FES	APR-2005
FINAL 2004 Fall Sampling Report Groundwater Monitoring and Data Analysis at the Landfill Source Area OU4	FES	MAY-2005
2005 Work Plan Groundwater Monitoring and Data Analysis at the Landfill Source Area OU4	FES	MAY-2005
2005 Work Plan Groundwater Monitoring and Data Analysis at the Landfill Source Area OU4	FES	MAY-2005
FINAL 2004 Operation, Maintenance and Monitoring Report BLDGs 2111/2112 Treatment Systems	ENSR	MAY-2005

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2005

Title	Author	Date
FINAL Work Plan for Pipeline Tracing and Survey; Petroleum, Oil and Lubricants (POL) Source Removal; 2005 Field Season	BNCI	JUN-2005
Semi-Annual Report VOC Emission Tracking Program for 2005 IRP Treatment Systems	ENSR	JUL-2005
DRAFT Work Plan Neely Road AS/SVE System Construction and Operation	MACTEC	AUG-2005
FINAL 2004 Annual Report Investigative-Derived Waste Management Area	Northwind	AUG-2005
Draft Work Plan, Birch Hill Tank Farm Lead Investigation, OU5 Remedial Area 1A	FES	AUG-2005
Removal Action Report, Phytoremediation Study Site Decommissioning	Swaim	SEP-2005
Removal Action Report Phytoremediation Study Site Decommissioning	Swaim	SEP-2005
FINAL Technical Memorandum Monitored Natural Attenuation Sampling, East Quartermaster's Refueling Station, OU5	Northwind	SEP-2005
FINAL Quality Assurance Program Plan Addendum Monitored Natural Attenuation Sampling, East Quartermaster's Refueling Station, OU5	Northwind	SEP-2005
Milepost 2.7 and 3.0 Treatment Cell Decommissioning Report OU3	Swaim	SEP-2005
FINAL Work Plan Neely Road AS/SVE System Construction and Operation	MACTEC	OCT-2005
FINAL Horizontal Well Remediation System OM&M OU5	Northwind	NOV-2005
FINAL Source Area Remediation System OM&M OU5	Northwind	NOV-2005
2005 Sampling Report Two-Party Sites Former Bldg 3564, North Post, Bldg 2062/Formal Bldg 2063 and Former Bldg 5110	FES	DEC-2005
Final Sampling Report, Former Building 3564, North Post, Building 2062/2063	FES	DEC-2005

2006

Annual Report 2005 VOC Emission Tracking Program for IRP Systems	COE-ENSR	JAN-2006
Final 2004 Annual Report for the 801 Drum Burial Site Groundwater Monitoring	COE-ENSR	JAN-2006
Final OU2 Monitoring Well and Soil Boring Installation Work Plan	COE-Northwind	JAN-2006
Final Chena Bend Sub-area Field Report	COE-Northwind	JAN-2006
Annual Report 2005, VOC Emission Tracking Program for IRP Treatment Systems-FWA	MACTECH	JAN-2006
Final 2004 annual Report for the 801 Drum Burial Site Grndwtr Monitoring	ENSR	MAR-2006
Final Monitoring Well and Soil Boring Installation Work Plan	North Wind	MAR-2006
Final Chena Bend Subarea (housing) Field Report	North Wind	MAR-2006
Final Annual Report, OU5, Mar03-Jun 04, FWA	North Wind	MAR-2006
Final 2005 Annual Report for the 801 Drum Burial Site Grndwtr Monitoring FWA	ENSR	MAR-2006

IRP Previous Studies

2006

Title	Author	Date
Final 2006 Natural Attenuation Monitoring Work Plan FWA	FES	MAR-2006
Revised Project Schedule Neely Road AS/SVE Treatment System	FES	APR-2006
Final OU3, 2005 Monitoring Report, FWA	FES	APR-2006
2005 Post Wide Well Survey Database, FWA	FES	MAY-2006
2006 Work Plan, Grndwtr Monitoring and Data Analysis at the Landfill Source Area, OU4	FES	JUN-2006
Final 2005 Operation, Maintenance & Monitoring Report, Bldg 2111/2112 Treatment Systems, FWA	ENSR	JUL-2006
Annual Report 2005, VOC Emission Tracking Program for IRP Treatment Systems, FWA	ENSR	JUL-2006
Field Sampling Plan for the Communications Site, Revision 3, August 2006	CH2M Hill	AUG-2006
Final annual Report, OU5, July 2004 - July 2005, FWA	North Wind	AUG-2006
Final EQFS Monitored Natural Attenuation Sampling Fall 2005 Report, FWA	North Wind	AUG-2006
Quality Assurance Project Plan for the Communications Site, Revision 3, July 2006	North Wind	SEP-2006
Site Safety and Health Plan for the Communication Site, Revision 4, August 2006	North Wind	SEP-2006
Stryker Brigade Cantonment and FWA102 Areas Accident Prevention Plan, Revision 0, Aug 06	North Wind	SEP-2006
Final Birch Hill Lead Investigation Report, FWA	FES	OCT-2006
Final 2006 Operation, Maintenance & Monitoring Work Plan 2111/2112 Treatment Systems, FWA	ENSR	OCT-2006
Final 2006 Work Plan, Operable Unit 5, FWA	FES	OCT-2006
Final 2005 Monitoring Report, OU5, FWA	FES	DEC-2006

2007

Field Report FTW251/283 Replacement Housing	Shannon & Wilson	JAN-2007
Final CLOSES Evaluation 2111/2112 Site, FWA	CH2MHill	JAN-2007
Final Inventory and Decommissioning Cost Estimate, OU5, FWA	FES	FEB-2007
Final Well Decommissioning Report, FWA	Shannon & Wilson	FEB-2007
Final Sample Data Report, OU2/DRMO Yard, FWA	North Wind Inc	MAR-2007
preliminary Source Eval 1, Narrative Report, Former Comm site; Interim Final Revision 1 Apr 07	OASIS Env	APR-2007
Final 2006 Annual Sampling Report, Landfill Source Area, FWA	FES	JUN-2007
2007 Monitoring Well Database and Figure Updates, FWA	FES	JUN-2007
Sample Data Report for Spring 07 Groundwater Monitoring, FWA	FES	JUL-2007
Final 06 Annual Sampling Report, Two Party Sites FWA	FES	JUL-2007
OU3 Sample Data Report for Spring 2007 Groundwater Monitoring, FWA	FES	JUL-2007
Semiannual Report VOC Emission Tracking Program	MACTEC	JUL-2007

IRP Previous Studies

2007	Title	Author	Date
	for the First Half of 2007, FWA		
	Final 2006 Operation, Maintenance & Monitoring Report FWA	ENSR	JUL-2007
	Final 2007 Operation, Maintenance & Monitoring Report FWA	ENSR	JUL-2007
	Final Hot Spot Treatment Work Plan Addendum, FWA	FES	JUL-2007
	Sampling data report-Spring 07 - 2111/2112	FES	AUG-2007
	Sampling data report-Spring 07 - OU5	FES	AUG-2007
	Final Technical Memo for POL Source Removal 05 Field Season May 07	BNC	AUG-2007
	Final 2007 Work Plan Neely Road AS/SVE Treatment System	FES	OCT-2007
2008	Final Annual Report Neely Road AS/SVE System Oct05-Jan07	MACTEC	JAN-2008
	Final 2006 Monitoring Report Former Bldg 1168, OU2, FWA	FES	FEB-2008
	Final 2007 Monitoring Report, Bldg 2111/2112 FWA	FES	FEB-2008
	Final 06 Monitoring Report, OU5, FWA	FES	MAR-2008
	Final 07 Sampling report, 2pty, Former Bldg 3564, North Post, Bldg 2062/2063, Bldg 1002, bldg 2077 FWA	FES	MAR-2008
	Final 2007 Monitoring Report	FES	MAY-2008
	Final 08 Grdnwtr Monitoring Report and Data Analysis at the Landfill Source Area OU4	FES	MAY-2008
	Final 2007 Monitoring Report, OU5	FES	MAY-2008
	Final 2007 ASR, Grndwtr Monitoring and Data Analysis at the Landfill Source Area OU4	FES	MAY-2008
2010	2007/2008 Monitoring Report Bldg 3570 (Former PX Gas Station) FTWW-101	Fairbanks Environmental Services	FEB-2010
	2009 Sampling Report Two-Party Sites Operable Unit 5	Fairbanks Environmental Services	MAR-2010
	Final 2009 Annual Sampling Report Operable Unit 4	Fairbanks Environmental Services	MAY-2010
	2009 Monitoring Report Operable Unit 2 (DRMO)	Fairbanks Environmental Services	JUN-2010
	2009 Monitoring Report, Bldg2111/2112	Fairbanks Environmental Services	JUN-2010
2012	2011 Monitoring Report OU5	FES	MAY-2012
	Final 2011 Sampling Report UO4	FES	AUG-2012
2013	2012 Monitoring Report Neely Road	Fairbanks Environmental Services, Inc	MAR-2013
	Decommissioning of Treatment Systems OU3	FES	MAR-2013
	Final 2012 2111_2112 Monitoring Report	Fairbanks Environmental	APR-2013

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2013	Title	Author	Date
		Services, Inc	
	2012 Monitoring Report OU2	FES	APR-2013
	2012 Monitoring Report OU5	FES	APR-2013
	Final 2012 Monitoring Report OU3	FES	MAY-2013
	2012 Annual Sampling Report OU4	FES	JUN-2013
	Final 2012 Institutional Controls Report	FES	SEP-2013
	Final 2012 Two-Party Monitoring Reports	Fairbanks Environmental Services, Inc	NOV-2013
2014			
	2013 Monitoring Report Bldgs. 2111 and 2112	Fairbanks Environmental Services, Inc	APR-2014
	Final 2013 Two-Party Sampling Report	Fairbanks Environmental Services, Inc	MAY-2014
	2013 Monitoring Report Neely Road	Fairbanks Environmental Services, Inc	MAY-2014
	2013 Monitoring Report OU2	FES	JUN-2014
	2013 Monitoring Report OU5	FES	JUL-2014
	2013 Monitoring Report OU3	FES	DEC-2014
	2013 Annual Sampling Report OU4	FES	DEC-2014
2015			
	Final 2013 Institutional Controls Report	FES	FEB-2015
	2014 Final 2111_2112 Monitoring Report	Fairbanks Environmental Services, Inc	MAY-2015
	RD/RA Work Plan Former Communications Site OU6	Jacobs Engineering	MAY-2015

FORT WAINWRIGHT
Installation Restoration Program
Site Descriptions

Site ID: CC-FTWW-114
Site Name: Drum Site West of DRMO
Alias: SITE N-4

STATUS

Regulatory Driver: CERCLA

RRSE: NOT EVALUATED

Contaminants of Concern: Pesticides, Petroleum, Oil and Lubricants (POL), Polychlorinated Biphenyls (PCB), Polycyclic Aromatic Hydrocarbons (PAH), Semi-volatiles (SVOC), Volatiles (VOC)

Media of Concern: Groundwater, Soil

Phases	Start	End
PA.....	201401.....	201408
SI.....	201409.....	201610
RIP Date:	N/A	
RC Date:	201610	

SITE DESCRIPTION

Site N-4, also known as the Drum Site West of Defense Reutilization and Marketing Office (DRMO), is described in the OU1 ROD (US Army 1997) as a 650-foot by 700-foot area located approximately 400 feet west of the DRMO salvage yard and 200 feet north of the Old Richardson Highway. The site was originally identified as a potential source of contamination based on a review of a 1967 aerial photograph. Site N4 was designated as a motor pool and automotive maintenance shop in the 1950s. The motor pool reportedly used solvents, oils, and fuels in its operation. In 1961, the Army turned the area into a landfill and operated it as such until the early-1970s. The landfill reportedly was used to dispose of solid materials such as porcelain products, refrigerators, ranges, and signposts.

Several investigations have been conducted at Site N-4 to review historical activities at the site and to evaluate the potential presence of soil and groundwater contamination based on its past use as a landfill.

The site was incorporated into OU1, and an RI was conducted in 1995 to determine the extent of lead contamination in surface and subsurface soil. Samples collected during the RI contained contaminant levels below naturally occurring levels for the area, risk-based concentrations (RBC), or other applicable or relevant and appropriate requirements. Groundwater samples were analyzed to determine whether the landfill operations impacted groundwater quality at this location. Analytical results detected very low levels of solvent in two samples during one sampling event (OU1 ROD; US Army, 1997).

A baseline risk-assessment was conducted at this site. Excessive lifetime cancer risks were determined to be within the acceptable risk range for current and future exposure scenarios. The non-cancer risks were below a hazard index of 1. Based on the results of the RA, a determination of NFA under CERCLA was made in the OU1 ROD.

The site has since been expanded to encompass an area of approximately 75 acres that extends along the post boundary fence approximately 1,200 feet to the west from the southwest corner of the DRMO yard, and approximately 2,700 feet to the north. Drums and possible munitions debris (MD) were encountered in the area near the boundary fence during pipeline investigations in 2013. Drums and other debris have also been encountered in this area during training exercises. The number of drums, their contents, and nature and extent of other debris at the site needs to be investigated.

The site is being investigated as part of the FY15 SI/RI contract.

CLEANUP/EXIT STRATEGY

The results of the RI will be evaluated to finalize the exit strategy. It is unclear at this time what the conclusions of the investigations will be or what, if any, actions will need to be taken in the future. With this uncertainty, it is not possible at this time to postulate what the exit strategy for this site will be.

Site ID: FTWW-001
Site Name: MOTOR POOL (BLDG 3421,3425)
Alias: NFA

STATUS

Regulatory Driver: CERCLA

RRSE: NOT EVALUATED

Contaminants of Concern: Petroleum, Oil and Lubricants (POL)

Media of Concern: Groundwater, Soil

Phases	Start	End
PA.....	198101.....	198112
SI.....	199203.....	199302
LTM.....	199302.....	204409

RIP Date: N/A

RC Date: 199302

SITE DESCRIPTION

FTWW-001 is the site of vehicle maintenance facilities that were constructed in 1954. Maintenance, repairs, and services for wheeled and tracked vehicles, including oil changing, radiator antifreeze purging, and spot painting was conducted in two maintenance shops. Underground storage tanks (UST) were removed from these buildings. The Motor Pool at Buildings 3421, 3425, 3725, and 5195 was recommended for NFA by regulatory agencies in the OU5 ROD. As part of the 2014 program review it was determined that this site had been closed with ICs in the ADEC database and, therefore, the LTM phase was opened to reflect this. As directed by USAEC, LTM costs are being tracked under FTWW-026 to simplify the process.

CLEANUP/EXIT STRATEGY

The 2014 program review determined that this site was closed with ICs in the ADEC database; therefore, the LTM phase was opened to reflect this and will continue through FY46. Since the nature and extent of contamination at the listed sites is expansive, and soil removal is cost prohibitive, LUC/ICs are the only practicable solutions for soil contamination. The nature of the contaminants of concern at the above listed sites requires extensive time periods to naturally attenuate in Alaska. Unless the contaminated soils are removed from the sites, annual LUC/IC inspection/reporting will be required at these sites for the foreseeable future.

Site ID: FTWW-011

Site Name: POWER PLANT COAL STORAGE YARD (BLDG3595)

Alias: OU4/2A

STATUS

Regulatory Driver: CERCLA

RRSE: LOW

Contaminants of Concern: Dioxins/Dibenzofurans, Polycyclic Aromatic Hydrocarbons (PAH), Volatiles (VOC)

Media of Concern: Groundwater, Soil

Phases	Start	End
PA.....	199101.....	199201
SI.....	199101.....	199201
RI/FS.....	199312.....	199609
RD.....	199705.....	199707
IRA.....	199405.....	199409
RA(C).....	199709.....	199709
RA(O).....	199709.....	200304
LTM.....	200305.....	204409

RIP Date: 199709

RC Date: 200305

SITE DESCRIPTION

The ROD for this site was signed on Sept. 30, 1996. A soil vapor extraction (SVE)/air sparging (AS) system was installed during summer 1997. Additional sampling was conducted to ensure no migration of contamination off site, and to eliminate any need for system expansion. ICs are in place. The SVE/AS system was decommissioned in FY04. LUCs include signs, dig permit requirements, zoning, and groundwater use restrictions which are included in the master plan GIS database. A five-year review recommended that the IC boundary be expanded to include the extent of groundwater plume and the evaluation of system expansion to include an area under a coal pile. The evaluation showed no expansion was necessary and the boundaries were adjusted on the IC map. A CLOSES evaluation was completed in FY04 with a recommendation for no further monitoring at the site. The installation received regulator concurrence to stop monitoring in FY04. FTWW-099 (Building 3564) will serve as a protectiveness monitoring point for migration pathway. These decisions were formally documented in the 2006 FWA Five-Year Review.

In accordance with the FFA, LUCs/IC were reestablished for contamination that exceeds cleanup levels left on the utility contractor's property.

LTM costs will be documented under FTWW-026, Pesticide Storage (Building 1599).

CLEANUP/EXIT STRATEGY

LUCs/ICs (digging restrictions and no use of the groundwater) will remain in place for the foreseeable future. Since the nature and extent of contamination at the listed sites is expansive, and soil removal is cost prohibitive, LUC/ICs are the only practicable solutions for soil contamination. The nature of the contaminants of concern at the above listed sites requires extensive time-periods to naturally attenuate in Alaska. Unless the contaminated soils are removed from the sites, annual LUC/IC inspection/reporting will be required at these sites for the foreseeable future.

Site ID: FTWW-023
Site Name: DYKE RANGE
Alias: NFA

STATUS

Regulatory Driver: CERCLA

RRSE: LOW

Contaminants of Concern: Munitions and explosives of concern (MEC), Munitions constituents (MC), Petroleum, Oil and Lubricants (POL), Semi-volatiles (SVOC), Volatiles (VOC)

Media of Concern: Groundwater, Soil, Surface Water

Phases	Start	End
PA.....	198101.....	198112
SI.....	198101.....	201610

RIP Date: N/A

RC Date: 201610

SITE DESCRIPTION

FTWW-023 is located southeast of FWA's main cantonment area, and is adjacent to local refineries, schools, and private housing areas. Formerly it was an anti-aircraft artillery (AAA) practice firing point for AAA crews stationed at Ladd Field/Air Force Base. Full range facilities were located on this site as well as a drone launch facility. After the range facility was demolished, local residents commonly used this range as a dump for disposal of common-day refuse, such as cars, washers, dryers, refrigerators, etc. as well as drums of unmarked materials, batteries, and other potentially hazardous materials. A removal action funded by the installation was conducted in the summer of 1995, which resulted in hauling the refuse to the Post Landfill and disposing of the hazardous waste to a transportation, storage, and disposal facility (TSDF).

Based on the types of discarded refuse, low risk to human and environmental receptors was presumed so the need for soil or groundwater sampling at the time was determined to not be required.

This area is still considered an active troop maneuver and training area, thus an active range. Potential unexploded ordnance (UXO), debris, and drums left in water bodies remain as potential contaminants of concern (COC) based on past military activities.

This area is currently being considered as a viable route for new railroad corridors. This action is still under consideration. As a result, this site was reopened for an SI level investigation to determine if more extensive actions are required.

CLEANUP/EXIT STRATEGY

Further requirements will be determined when the SI is completed.

Site ID: FTWW-024
Site Name: BLAIR LAKES DISPOSAL SITE
Alias: NFA

STATUS

Regulatory Driver: CERCLA

RRSE: LOW

Contaminants of Concern: Pesticides, Petroleum, Oil and Lubricants (POL), Volatiles (VOC)

Media of Concern: Groundwater, Sediment, Soil, Surface Water

Phases	Start	End
PA.....	198101.....	198112
SI.....	198101.....	198112
RI/FS.....	201409.....	201611
IRA.....	198806.....	198809

RIP Date: N/A

RC Date: 201611

SITE DESCRIPTION

The Blair Lakes Drum Site is in the Tanana Flats Training Area, approximately 35 miles southeast of the FTW cantonment area. The site consists of the North and South Blair Lakes, a 3,000 foot by 60 foot dirt and grass runway and taxiway, and surrounding lowland and upland areas. The old homestead used to have a small group of interconnected, wood-framed Quonset huts, power generation and refrigeration equipment for conducting cold-weather equipment experiments and testing. There are eight archaeological sites currently being investigated.

FTWW-024 has been used by the DoD since the early-1940s as an equipment test site and remote training area and small arms range. The area is adjacent to the Alpha Impact Area which is used for field artillery, small arms, and troop maneuvers. It is also adjacent to the Air Force's bombing and strafing practice area.

A limited survey of the site was conducted in 1986. Drum, surface-water, and sediment sampling occurred. Halogenated organics, ketones, benzene derivatives, and alkenes were found in 25 drum samples.

In 1987, a drum removal occurred at the site. A total of 1,618 empty and 48 full 55-gallon drums, two large fuel storage tanks, and approximately 15 cubic yards (cy) of miscellaneous debris were removed and disposed in accordance with hazardous waste statutes. The remaining debris was landfilled in a permitted area west of the runway and north of South Blair Lakes.

A DD (1995) indicates that the reported contaminant levels are considered protective at this site due to its remote nature, incidental human exposure, and generally incomplete exposure pathways of inhalation, ingestion, or dermal exposure of contaminated soil. It was concluded in the DD that there is no evidence that a continuing source of contamination posed an unacceptable risk to human health or the environment at this site (via soil pathway) and it was signed NFA on July 25, 1994. Based on the 2014 USAEC program review it is unclear if this site requires additional consideration.

CLEANUP/EXIT STRATEGY

The source area will undergo additional investigations in FY16 to determine if additional actions are required.

Site ID: FTWW-026
Site Name: PESTICIDE STG (BLDG 1599)
Alias: NFA

STATUS

Regulatory Driver: CERCLA

RRSE: LOW

Contaminants of Concern: Dioxins/Dibenzofurans, Pesticides, Petroleum, Oil and Lubricants (POL), Volatiles (VOC)

Media of Concern: Groundwater, Soil

Phases	Start	End
PA.....	198101.....	198112
SI.....	198101.....	198112
RI/FS.....	199410.....	199706
LTM.....	199707.....	204509

RIP Date: N/A

RC Date: 199707

SITE DESCRIPTION

Formerly, Building 1599 was used for motor vehicle repair, hazardous waste storage, and other industrial operations. The building was demolished in 1986.

Based on the 1997 DD the site is closed with ICs; however, contaminated soils were encountered during excavation activities associated with recently programmed building demolitions and routine and emergency repairs of infrastructure within or adjacent to many of the listed sites. Fixed-lab results confirmed that COCs in the soil exceeded regulatory limits. Soils were found to contain pesticides, chlorinated solvents, and degradation compounds. Contaminates exceed USEPA and ADEC cleanup levels.

Based on contamination encountered, the Garrison Commander has established LUC/ICs that require long-term management of the area. The site requires annual inspection to ensure compliance with LUC/ICs. In addition to this facility, 12 sites require the same level of effort (LTM only) and will be managed under FTWW-026.

CLEANUP/EXIT STRATEGY

Since the nature and extent of contamination at the listed sites is expansive, and soil removal is cost prohibitive, LUC/ICs are the only practicable solutions for soil contamination. The nature of the contaminants of concern at the above listed sites requires extensive time-periods to naturally attenuate in Alaska. Unless the contaminated soils are removed from the sites, annual LUC/IC inspection/reporting will be required at these sites for the foreseeable future.

Site ID: FTWW-037
Site Name: FIRE FIGHTING TRAINING AREA
Alias: NFA

STATUS

Regulatory Driver: CERCLA

RRSE: LOW

Contaminants of Concern: Other (Perfluorooctane sulfonate & perfluorooctanoic acid), Petroleum, Oil and Lubricants (POL)

Media of Concern: Groundwater, Soil

Phases	Start	End
PA.....	198101.....	198112
SI.....	198101.....	198112
RI/FS.....	199312.....	199609
RA(C).....	199510.....	199609
LTM.....	201202.....	204509

RIP Date: N/A

RC Date: 201202

SITE DESCRIPTION

This area is being considered as a site for new mission critical facilities. As such the installation conducted pre-construction investigations to provide the Garrison Staff with current information regarding COCs at this site.

Initial investigations confirmed chlorinated compounds and degradation products (i.e. dioxon and furan) in the soil at the Fire Training Pits. Recent soil and groundwater sampling activities encountered USEPA and State Emerging COCs. Fixed-Lab results confirmed that COCs in the soil exceeded regulatory screening levels within or adjacent to these sites.

The USAEC and the Installation agreed that all costs for LTM only sites will be documented under FTWW-026.

As of 2014, a parking area (organization parking) for specialized aviation units is currently planned for construction in 2015 in this area. The parking would be located between the new Stryker Organization parking area and the Military Operations in Urban Terrain (MOUT) site. The approximately 280 foot by 700 foot (200,000 square feet) parking area overlies the former Fire Training FTP-3A and construction may require an excavation depth of up to five feet. A simulated agricultural site is planned for development of FTP-3B, the area to the east of the MOUT site.

These projects would constitute a change in land use for these areas and may require an ESD for the OU4 ROD. The ESD is an option task under the current SI/RI contract. This contract is fully funded and costs beyond FY15 cannot be determined at this time.

CLEANUP/EXIT STRATEGY

LUCs/ICs (digging restrictions and no use of the groundwater) will remain in place for the foreseeable future unless the area is selected for construction of mission critical facilities.

Site ID: FTWW-038
Site Name: FT. WAINWRIGHT LANDFILL PLUME
Alias: 0U4/1A

STATUS

Regulatory Driver: CERCLA

RRSE: HIGH

Contaminants of Concern: Metals, Semi-volatiles (SVOC), Volatiles (VOC)

Media of Concern: Groundwater

Phases	Start	End
PA.....	198101.....	198112
SI.....	198101.....	198112
RI/FS.....	199312.....	199609
RD.....	199609.....	199706
RA(C).....	199706.....	199709
RA(O).....	199709.....	204509
RIP Date:	199709	
RC Date:	204509	

SITE DESCRIPTION

This landfill is part of OU4. The source area (an inactive portion) covers approximately 14 acres and is located adjacent to the FWA active landfill, which is north of River Road. Gravel excavation began in the landfill as early as 1944. Landfill operations reportedly began in the 1950s; however, there are no historical records documenting the starting date of landfill operations.

Unsegregated waste was disposed in the gravel pits and then burned. After the pits were filled with burned debris, they were covered.

The RI was completed in 1994. Sampling results indicated unacceptable levels of VOCs, SVOCs and metals in the groundwater. Discharge to the Chena River and transport to downgradient wells were issues of concern.

The chosen alternative in the September 1996 ROD was a phased approach. The first phase included capping the inactive portion of the landfill, which was completed in September 1997. The alternative also included natural attenuation, monitoring of groundwater, and ICs. The second phase would include evaluation of potential groundwater treatment, if contaminant levels increase (which has not been shown to date). Annual inspections by Army personnel of the landfill cap's integrity have taken place and a professional inspection was conducted in FY09 with indications that the landfill cap is one of the best within the state; the entire site has been fenced and it appears that no threat to the cap's integrity exists. The groundwater contamination [benzene and trichloroethylene (TCE)] is localized and is not migrating. Currently programmed to have annual maintenance and mowing with continued monitoring. Two new wells were installed in FY10. A portion of this site is also identified as a MMRP (FTWW-009-R-01).

Identified deficiencies in the cap were investigated and determined to be non-critical in 2010. Cap maintenance and vegetation removal were conducted in 2010. They are conducted before each five-year review. Replacement wells were installed in 2010-2011.

In FY11, the USEPA cited FWA for violations of the underground injection control (UIC) program. As a result of the compliance order, the Building 1191 septic system was incorporated into this source area for investigation. This investigation began with FY12 monitoring and continues to be sampled.

ICs will remain in place for the foreseeable future. Wells are sampled semiannually for monitored natural attenuation (MNA) as required by the ROD, FFA meetings, and USEPA compliance order for UICs at the landfill.

CLEANUP/EXIT STRATEGY

MNA and cap inspections will continue for the foreseeable future.

Site ID: FTWW-038

Site Name: FT. WAINWRIGHT LANDFILL PLUME

Alias: 0U4/1A

During the RA(O) phase, groundwater monitoring will continue until COCs decrease below remedial action goals (RAG). Based on the current trend of stable contaminant concentrations, this site will likely require groundwater monitoring for the foreseeable future. There is no groundwater model data available to predict when COCs will reach the RAGs. Therefore, according to July 2014 update to the DERP manual, this CTC assumes a finite RA(O) duration of 30 years, through FY2046. While monitoring could be decreased from semiannually to every five years in the future, this CTC is based on no change to the current sampling frequency, number of wells, or analytes.

Site ID: FTWW-047
Site Name: DRMO SALVAGE YARD
Alias: OU2/1A

STATUS

Regulatory Driver: CERCLA

RRSE: HIGH

Contaminants of Concern: Petroleum, Oil and Lubricants (POL), Semi-volatiles (SVOC), Volatiles (VOC)

Media of Concern: Groundwater, Soil

Phases	Start	End
PA.....	198101.....	198112
SI.....	198101.....	198112
RI/FS.....	199311.....	199703
RD.....	199704.....	199706
RA(C).....	199707.....	199805
RA(O).....	199709.....	204510
RIP Date:	199805	
RC Date:	204510	

SITE DESCRIPTION

The DRMO salvage yard is made up of six sub-areas. Four sub-areas with petroleum and solvent contamination are part of OU2; two other petroleum-contaminated areas were addressed previously in DRMO POL sites (DRMO1 and DRMO5); however, because the plumes appear to have commingled, they can best be treated as one area.

Contaminants found on this site were solvents and petroleum in the soil and groundwater. The site is located along Badger Road, northwest of the intersection of Badger Road and the Old Richardson Highway, on the eastern boundary of FWA. The salvage yard is a fenced compound covering approximately 25 acres. Spills occurred routinely at this source area. There is a potable water well in a deeper aquifer within the area of the solvent plume that is sampled six times annually and has consistently met maximum contaminant levels (MCL).

The RI/FS was completed in October 1994. The OU2 ROD was signed in April 1997, with the chosen alternative being AS/SVE. The OU2 three-party system was installed during the summer of 1997. Solvent contaminant levels have dropped significantly but remain above action levels. The plume appears to be stable. A CLOSES evaluation was completed in January 2004 and concluded that the current systems managed under the OU2 three-party agreement and the DRMO1 (two-party agreement) were not effective in reaching the total area of contamination. The DRMO1 system was shut down; the OU2 three-party system operated in AS mode only. A soil gas survey was conducted to attempt to delineate the boundaries of soil contamination (solvents); however, the survey did not find a soil source. In 2006, the system was shut down and a more effective alternative is being evaluated. The system was decommissioned in October 2008 and in situ reduction via injection of stimulants occurred in FY09.

The operation of the DRMO5 area system was no longer cost effective and was decommissioned in October 2008. As of the 2010 sampling season, diesel range organics (DRO) in groundwater remained above action levels, however this plume was stable. Tetrachloroethylene (PCE) is above action levels at DRMO4. Sample results from 2008 indicate that reductive dechlorination (natural attenuation) is occurring. MNA will continue.

In FY10 the Army initiated a pilot study to inject reductive chemicals into the soil and groundwater in an attempt to reduce contaminate levels below MCLs. Groundwater results indicated significant progress so that injections continued into FY11.

FY12 activities included continued monitoring of chemical reduction and MNA of DRO.

The AS/SVE systems were decommissioned. The AS/SVE systems were partially ineffective at bringing COCs under the MCLs. A treatability study for reductive dechlorination of the PCE and TCE was conducted.

During the 2014 and 2015 FFA meetings, all agencies agree that if the 2015 sampling & analysis report continues to show chlorinated compounds below MCLs, the Army could reduce the sampling to every five years before the five-year review.

Site ID: FTWW-047
Site Name: DRMO SALVAGE YARD
Alias: OU2/1A

CLEANUP/EXIT STRATEGY

The study was successful and groundwater levels continue to decline. Soil still exceeds regulatory cleanup levels but do not pose an unreasonable risk to human health or the environment.

During the RA (O) phase, groundwater monitoring will be conducted annually at the DRMO-1 (Three-Party), DRMO-2, and DRMO-4 sites under FTWW-047. While it is anticipated that monitoring could be decreased in the future from annually to every five years at the DRMO-1 (Three-Party), DRMO-2, and DRMO-4 sites this CTC is based on no change to the current sampling frequency, number of wells, or analytes at these sites. Monitoring will continue until COCs decrease to below RAGs. There is no groundwater model data available to predict when COCs will reach the RAGs. Therefore, according to the July 2014 update to the DERP Manual, groundwater monitoring and institutional controls will continue at these sites for an assumed duration of 30 years.

Site ID: FTWW-050
Site Name: NORTH POST SITE
Alias: 2PY/REM/2A

STATUS

Regulatory Driver: CERCLA

RRSE: LOW

Contaminants of Concern: Metals, Petroleum, Oil and Lubricants (POL), Polychlorinated Biphenyls (PCB), Volatiles (VOC)

Media of Concern: Groundwater, Soil

Phases	Start	End
PA.....	198701.....	199010
SI.....	199001.....	199010
RI/FS.....	199311.....	199703
RD.....	199703.....	199801
IRA.....	199604.....	199806
RA(C).....	199604.....	201303
RA(O).....	201303.....	201312
LTM.....	201401.....	204509

RIP Date: 201303

RC Date: 201401

SITE DESCRIPTION

The North Post Site was originally part of OU2. The RI indicated that POL was the only chemical present, so the site became part of the two-party agreement.

The site consists of contamination from USTs that supported a test center. It is located on a meander (oxbow) of the Chena River and it is approximately 10 acres; adjacent to family housing. Contamination investigations were initiated in September 1985, and an initial removal action at the North Post Site for POL contaminated soils was completed in the summer of 1993. The RI was completed in October 1994. Removal of PAH from surface soils was completed in fall of 1996. An AS/SVE system was installed to treat the POL-contaminated soil and groundwater adjacent to the Chena River to the north and west. The system was shut off in November 2000 when it appeared action levels had been achieved. A review of the 2001 data indicated that sampling could be reduced to an annual event and the system could remain off; however, upon review of the 2002 sampling results, it was discovered that contamination had increased, and evidence of sheen, previously undetected, was found in one well adjacent to the Chena River.

A site visit early in 2003 revealed a new geomorphological feature; a trench had formed on the site in an area not previously treated. New wells were installed in June 2003, and were sampled in August, along with the remaining four existing wells. A historical document search was completed in FY04 to consolidate all of the old data. The new wells revealed no new information or findings. A CLOSES evaluation was completed in June 2004 with a recommended long-term monitoring plan.

In 2005 high levels of metals and petroleum exceeding state standards, as well as low level PCBs were found during a geotechnical investigation for a family housing project. The housing project was relocated.

The SVE/AS system was decommissioned in 2010.

Based on a December 2013 letter from ADEC the site is RC with ICs to prevent digging or other construction activities without coordination with ADEC and the USEPA.

CLEANUP/EXIT STRATEGY

The extent of the IC/LUC boundaries were expanded to incorporate additional COCs in the soil and groundwater. Long-term groundwater monitoring every five years will continue to ensure protection of the Chena River and to monitor plume stabilization. ICs (restricting land/groundwater use and soil disturbing activities) will remain in place. Frequency and parameters will be evaluated at the next five-year review.

Site ID: FTWW-055
Site Name: FAIRBANKS FUEL TERMINAL
Alias: OU3/1A

STATUS

Regulatory Driver: CERCLA
RRSE: HIGH
 Contaminants of Concern: Metals, Petroleum, Oil and Lubricants (POL), Volatiles (VOC)
 Media of Concern: Groundwater, Soil

Phases	Start	End
PA.....	198801.....	199101
SI.....	198801.....	199101
RI/FS.....	199209.....	199603
RD.....	199509.....	200106
IRA.....	199607.....	199607
RA(C).....	199607.....	200109
RA(O).....	199709.....	204509
RIP Date:	200109	
RC Date:	204509	

SITE DESCRIPTION

The Fairbanks Fuel Terminal (FFT) is part of OU3. This site is the most complex site on FWA, because of its geology, the relatively large size of the estimated release, and off site impacts. This site covers about 250 acres in the northwest corner of FWA. The original 1996 RI and ROD focused on the base of Birch Hill and the contaminants of benzene, ethylene dibromide (EDB), and dichloroethane (DCA) that exceeded federal drinking water standards. The ROD required SVE and AS.

A substantial increase in the aerial extent of contamination at the site, to include free-product in fractured bedrock on Birch Hill. Approximately 3,000 gallons of free product have been recovered from the bedrock aquifer; however, an undetermined amount remains. Results from the FY98 field season sampling events determined that large amounts of contamination from EDB and DCA are located on Birch Hill. These contaminants are a continuing factor in contaminating the groundwater within the alluvial aquifer. Further investigation during 1999 and 2000 indicated that there was off-post migration from the tank farm. In 1995 bottled water was provided to bordering churches; contamination has steadily decreased. Contamination below cleanup levels remains in one drinking water well, which is monitored semiannually. An AS curtain was installed in 1999 and expanded in 2000 along the fence line to treat groundwater before it migrated off-post. A product recovery system was installed on Birch Hill in 2000 and was modified in 2001 to capture product prior to moving downhill and subsequently off-post. An ESD was completed in September 2002, to include product recovery implementation, additional investigation and modeling.

In 2003, additional geophysical investigations and tracer studies occurred and additional wells were installed. In FY04, groundwater flow models were developed to better understand complex flow patterns in the presence of permafrost and bedrock structures. Geophysical investigations in FY04 indicated that a data gap was present and investigation was needed to determine the eastward flow in the bedrock. Three bedrock monitoring wells were installed during the FY05 field season.

In the past, USARAK worked with the private land owners adjacent to the site to install and monitor five wells on their property. Groundwater flows predominantly away from the site and away from private property. To date, all indications are that existing treatment systems (SVE/AS, along with vacuum-enhanced free-product recovery) on Birch Hill have achieved their goal at the property boundary, and contaminant levels in off-post wells have remained consistently below any regulatory cleanup levels since July 2000. The systems were turned off in 2006 for rebound evaluation. The study is ongoing.

The five off-post wells were removed by a new property owner in 2006. Replacement wells were scheduled to be installed in 2008; however only two wells have been installed to date with the remaining well installation pending until an easement is finalized. Groundwater monitoring continued to evaluate the rebound study and ensure that off site migration is not occurring. The conceptual site model was updated (evaluate fate and transport of contaminant within permafrost and fractured bedrock). The ROD cleanup goals for the Truck Fill Stand and contamination from Bldg 1173 (sub-sites within Birch Hill), have been achieved. DRO still exceeds the Alaska water quality goals.

In 2015, the aboveground storage tanks (AST), Truck Fill Stand, and surface piping and valves were removed from the site. additional investigations may be warranted.

Site ID: FTWW-055
Site Name: FAIRBANKS FUEL TERMINAL
Alias: OU3/1A

ASTs within the FFT boundaries have been split out into a separate AEDB-R site, FTWW-096, which is part of OU5. The tank farm dates back to 1943. In FY11, sample results indicated an increase in EDB and DCA which has regulatory agencies concerned. Regulators have requested that the Army initiate treatability studies to address this issue. Benzene is stable and is no longer migrating off post. The Army continues to monitor groundwater and is actively pursuing a pilot study using reductive compounds in an attempt to address agency concerns.

In October 2008, installation of two new off-post replacement wells was completed. In 2010, the new property owner adjacent to FWA refused to grant the Army an easement for additional well installation.

CLEANUP/EXIT STRATEGY

Maintenance of product recovery systems will continue in case the system is required for future use.

Monitoring of the existing off-post wells network will be required for the foreseeable future to determine contaminant trends and to ensure no off-site migration. Groundwater at the adjacent churches still fails ADEC drinking water quality standards. The Army will continue to provide drinking water to the church for the foreseeable future.

Annual groundwater monitoring will be conducted in the RA(O) phase through FY2046. While it is anticipated that monitoring could be decreased from annually to every five years in the future, or that the number of wells to be monitored could be reduced, this CTC is based on no change to the current sampling frequency, number of wells, or analytes. Monitoring will continue in the RA(O) phase until COCs decrease to below RAGs. Monitoring and ICs will continue at the site in the RA(O) phase with an assumed duration for CTC calculation of 30 years.

Site ID: FTWW-057
Site Name: UST, BLDG 3483(#277,#278)
Alias: USTR/3A

STATUS

Regulatory Driver: RCRA
RRSE: LOW
 Contaminants of Concern: Petroleum, Oil and Lubricants (POL)
 Media of Concern: Groundwater, Soil

Phases	Start	End
ISC.....	198701.....	198712
INV.....	199108.....	199302
CAP.....	199205.....	199307
DES.....	199307.....	199407
IRA.....	199006.....	199008
IMP(C).....	199408.....	199408
IMP(O).....	199408.....	201210
LTM.....	201211.....	204210

RIP Date: 199408
RC Date: 201211

SITE DESCRIPTION

Active treatment has remediated groundwater from Building 3481 (FTWW-056) to below action levels. Received a closure letter from ADEC dated October 2012 with requirement for LUCs. LUCs include dig permit requirements, groundwater and zoning restrictions. LTM: included in master plan and GIS database.

CLEANUP/EXIT STRATEGY

The ADEC closure letter dated October 2012 requires ICs, which includes LUCs with dig permit requirements, groundwater and zoning restrictions. LTM is included in the master plan and GIS database, and will continue through FY46. Since the nature and extent of contamination at the listed sites is expansive and soil removal is cost prohibitive, LUC/ICs are the only practicable solutions for soil contamination. The nature of the COCs at the above listed sites requires extensive time periods to naturally attenuate in Alaska. Unless the contaminated soils are removed from the sites, annual LUC/IC inspection/reporting will be required at these sites for the foreseeable future.

Site ID: FTWW-061
Site Name: UST, BLDG 5004,(UST 310)
Alias: NFA

STATUS

Regulatory Driver: RCRA

RRSE:

Contaminants of Concern: Dioxins/Dibenzofurans, Petroleum, Oil and Lubricants (POL), Polychlorinated Biphenyls (PCB), Polycyclic Aromatic Hydrocarbons (PAH), Volatiles (VOC)

Media of Concern: Groundwater, Soil

Phases	Start	End
ISC.....	198101.....	198112
INV.....	198101.....	198112
CAP.....	199205.....	199310
IRA.....	199006.....	199009
LTM.....	201302.....	204409

RIP Date: N/A

RC Date: 199310

SITE DESCRIPTION

This building and tank are located within the boundaries of the DRMO Salvage Yard FTWW-047. A closure letter dated March 23, 1994 was received for the soils at this site and groundwater is being addressed under OU 5 as part of FTWW-047.

USAEC and the installation agreed that all costs for LTM-only sites will be documented under FTWW-026.

CLEANUP/EXIT STRATEGY

LUCs/ICs (digging restrictions and no use of the groundwater) will remain in place for the foreseeable future. Since the nature and extent of contamination at the listed sites is expansive and soil removal is cost prohibitive, LUC/ICs are the only practicable solutions for soil contamination. The nature of the COCs at the above listed sites requires extensive time periods to naturally attenuate in Alaska. Unless the contaminated soils are removed from the sites, annual LUC/IC inspection/reporting will be required at these sites for the foreseeable future.

Site ID: FTWW-063
Site Name: UST, BLDG 1514 (#221,222,223,224)
Alias: NFA

STATUS

Regulatory Driver: RCRA

RRSE: LOW

Contaminants of Concern: Petroleum, Oil and Lubricants (POL)

Media of Concern: Groundwater, Soil

Phases	Start	End
ISC.....	198701.....	198712
INV.....	199005.....	199212
CAP.....	199205.....	199912
IRA.....	199005.....	199109
LTM.....	199912.....	204409

RIP Date: N/A

RC Date: 199912

SITE DESCRIPTION

This site has been an aircraft refueling area since the early-1940s. The old system was removed, a considerable amount of contaminated soil was removed, and monitoring wells were installed to monitor contaminant migration from the site.

A NFRAP letter was received from the state of Alaska on Dec. 17, 1999. Based on this letter, the site is closed with ICs. USAEC and the installation agreed that all costs for LTM-only sites will be documented under FTWW-026.

CLEANUP/EXIT STRATEGY

LUCs/ICs (digging restrictions and no use of the groundwater) will remain in place for the foreseeable future. Since the nature and extent of contamination at the listed sites is expansive and soil removal is cost prohibitive, LUC/ICs are the only practicable solutions for soil contamination. The nature of the COCs at the above listed sites requires extensive time periods to naturally attenuate in Alaska. Unless the contaminated soils are removed from the sites, annual LUC/IC inspection/reporting will be required at these sites for the foreseeable future.

Site ID: FTWW-064

Site Name: BIRCH HILL TANK FARM UST#345-350

Alias: NFA

STATUS

Regulatory Driver: RCRA

RRSE: MEDIUM

Contaminants of Concern: Petroleum, Oil and Lubricants (POL), Semi-volatiles (SVOC), Volatiles (VOC)

Media of Concern: Groundwater, Soil, Surface Water

Phases	Start	End
ISC.....	199005.....	199009
INV.....	199101.....	199212
CAP.....	199310.....	199605
IRA.....	199108.....	199406
LTM.....	201302.....	201611

RIP Date: N/A

RC Date: 199605

SITE DESCRIPTION

The Birch Hill Tank Farm USTs, also known as the East Birch Hill Tank Farm (EBHTF), is located in the northeast portion of FWA, north of the Chena River.

The EBHTF was constructed in 1943 to store fuels that were transported to FWA from Whitehorse, Canada via the Canadian Oil (CANOL) pipeline. The tank farm consisted of 34 50,000-gallon USTs, underground piping, concrete valve pits (CVPs), and three truck fill stands (TFS). The tank farm was connected to the railcar off-loading facility (ROLF), located on the south side of the Chena River, by an 8-inch fill line. A network of 6-inch main lines and 4-inch branch lines connected each individual tank to the 8-inch fill line. Products reportedly stored in the 12-foot diameter by 66-foot long steel USTs included high-octane aviation gasoline, jet fuels, and diesel fuel (E&E, 1993).

Use of the facility was terminated upon completion of the Haines-Fairbanks Pipeline (HFP) in 1955 because the HFP connected to the FFT located to the west of the EBHTF. In 1971, the portion of the HFP south of Eielson Air Force Base was closed, but the Eielson to Fairbanks Pipeline (FEP) remained active for another year before being shut down in 1972.

Twenty-four of the USTs in the EBHTF were removed from the site during the 1970s. In 1991, eight more USTs were located, excavated, and removed. The remaining two tanks were removed in 1994. The tanks were reported to be in good condition. The underground pipeline connections were capped and abandoned in place. All valve pits and truck loading and unloading stands remain in place. No operating record or spill history was located during the background search (FES, 2002).

All of the tanks and most of the valve pits and piping were removed during the 1970s with subsequent removals in the years to follow.

Initial investigations began in 1991 and ended in 1996.

POLs were detected in monitoring well FTWW-084, which is located a significant distance downgradient of this site.

In FY15, the Army initiated a data gap investigation to determine if the POL contamination in well FTWW-084 is related to the UST farm or related to a previously unidentified source. The results of this investigation will determine if additional investigation is required or maintain the status quo.

CLEANUP/EXIT STRATEGY

LUCs/ICs (digging restrictions and no use of the groundwater) will remain in place for the foreseeable future. Since the nature and extent of contamination at the listed sites is expansive and soil removal is cost prohibitive, LUC/ICs are the only practicable solutions for soil contamination. The nature of the COCs at the above listed sites requires extensive time periods to naturally attenuate in Alaska. Unless the contaminated soils are removed from the sites, annual LUC/IC inspection/reporting will be required

Site ID: FTWW-064
Site Name: BIRCH HILL TANK FARM UST#345-350
Alias: NFA

at these sites for the foreseeable future.

Site ID: FTWW-067
Site Name: 801 DRUM BURIAL SITE
Alias: OU1/1A

STATUS

Regulatory Driver: CERCLA
RRSE: HIGH
 Contaminants of Concern: Pesticides, Volatiles (VOC)
 Media of Concern: Groundwater

Phases	Start	End
PA.....	198101.....	198812
SI.....	199108.....	199201
RI/FS.....	199311.....	199610
RD.....	199709.....	200106
IRA.....	199208.....	199710
RA(C).....	199709.....	200106
RA(O).....	199710.....	204509
RIP Date:	200106	
RC Date:	204509	

SITE DESCRIPTION

FTWW-067 is part of OU1. The site is located between the west bank of the Chena River and Fegree Road and south of the Alaska railroad bridge. The site consists of approximately 20 acres. The site was discovered during the initial excavations for the 801 contract housing construction project. In 1987, a large quantity of drums were removed from the construction area during initial construction. Another large drum removal was undertaken in 1992, during the construction of a storm drain from the housing area to the Chena River. Overall, over 200 drums were found, roughly half of which contained product. Sampling results show high levels of POL, pesticides and solvents in soil and groundwater. Additional drums were found and removed during the summer 1995 RI and the follow-up 1996 investigation.

A ROD, signed in June 1997, recommended further RA (if additional drums were found), monitoring for POL, pesticides and solvents, ICs, and natural attenuation for groundwater. Additional geophysical surveys were conducted in 1997. No additional drums were found.

Monitoring wells to determine potential contamination migration to the Chena River were installed; sampling is conducted every fifth year as recommended in the CLOSES evaluation. This represents a significant reduction from past sampling intensity.

Investigation-derived waste (IDW) soils (850 cy) were remediated using phytoremediation versus shipping pesticide contaminated soils off-post; this ended in 2003. The soil was disposed of in the landfill.

LUCs are in place that restrict groundwater use and digging in the area. The plume is considered to be stable; however, the contamination is still above cleanup levels. Pesticides are at significant concentrations in the dissolved phase.

The last sampling event is was in FY15. The next five-year review is scheduled for FY16. LUC/ICs will be monitored each year.

CLEANUP/EXIT STRATEGY

Groundwater monitoring in the form of MNA will be conducted on a five-year frequency. The monitoring will be conducted during the year prior to a five-year review (i.e., during 2015 for inclusion in the 2016 five-year review). COCs appear to be stable. LUCs/ICs (digging restrictions and no use of the groundwater) will remain in place for the foreseeable future.

Site ID: FTWW-072

Site Name: OIL WATER SEPARATOR AT BLDG 1168

Alias: OU2/3A

STATUS

Regulatory Driver: CERCLA

RRSE: LOW

Contaminants of Concern: Petroleum, Oil and Lubricants (POL), Volatiles (VOC)

Media of Concern: Groundwater

Phases	Start	End
PA.....	198101.....	198112
SI.....	199203.....	199302
RI/FS.....	199311.....	199403
RD.....	199404.....	199405
IRA.....	199406.....	199406
RA(C).....	199406.....	199504
RA(O).....	199409.....	204509
RIP Date:	199504	
RC Date:	204509	

SITE DESCRIPTION

FTWW-072 is part of OU2. The building was constructed in 1950 as a lubricant oil and vehicle storage facility and was converted to a POL laboratory around 1962. It was located near the western boundary of FWA, adjacent to Trainor Gate Road. It was demolished in 1998.

The primary source of contamination was from a former leach well connected to an oil/water separator system. The contamination covers an area of approximately 50 feet from the leach well. Contaminants found initially at this site included POL and solvents. Treating this source was especially critical because the site is located within 500 feet of the post boundary and within 1,000 feet of a public school.

RA was undertaken for in situ treatment of contamination. The installation of an AS/SVE system was completed in November 1994. The system was turned off in 1998 upon reaching RA goals, monitored for rebound, and none occurred. The system was decommissioned in 2003.

A CLOSES evaluation was completed in FY04. A rapid optical screening tool (ROST) determined that the remaining subsurface contamination was confined to a limited area. The site was monitored in FY04. Benzene rebounded above RA goals in fall 2004 and January 2005. Low level benzene contamination persists. The surrounding area will be a part of family housing to support the Stryker Brigade Combat Team. Benzene levels rebounded three times the MCL in well PS-23 during the June 2008 sampling event. At the January 2009 FFA meeting, a recommendation was made and approved that this site be considered as a candidate for in-situ chemical oxidation (ISCO) to reduce benzene levels. Injections were complete in FY10. Contaminant levels decreased significantly. MNA will continue at this site.

CLEANUP/EXIT STRATEGY

Groundwater monitoring will continue through 2015, at which time site closure will be evaluated. The Army will decommission wells that are no longer needed. Sampling frequency will remain unchanged until lab results indicate COCs are below MCLs for two consecutive years. LUCs/ICs will be maintained for the foreseeable future.

Site ID: FTWW-079
Site Name: ENGINEER PARK DRUM SITE
Alias: NFA

STATUS

Regulatory Driver: CERCLA

RRSE:

Contaminants of Concern: Petroleum, Oil and Lubricants (POL), Polycyclic Aromatic Hydrocarbons (PAH)

Media of Concern: Soil

Phases	Start	End
PA.....	199203.....	199209
SI.....	199203.....	199407
IRA.....	199207.....	199302
LTM.....	201107.....	204509

RIP Date: N/A

RC Date: 199407

SITE DESCRIPTION

The Engineer Park Drum Site is located on the northeast side of Engineer Park on the south bank of the Chena River. Within CERCLA, OU2, the Engineer Park has a picnic area with a football and baseball field and an area used for the US Bureau of Land Management (USBLM) smoke jumper training.

Drum disposal reportedly began at this site after the 1967 Chena River flood. In August and September 1992, 680 unburied drums were removed from this source area. Approximately 10 percent of the drums contained gasoline, kerosene, degreasing solvents, and PCBs.

A preliminary source evaluation (PSE) and another drum removal occurred in 1993. Soil and groundwater were tested and ground penetrating radar was used to confirm that no additional drums were present. Based on the results of the PSE, the Army, ADEC, and the USEPA have recommended that this site have NFRAP in the OU1 ROD.

Based on ADEC website this site is NFA with ICs.

CLEANUP/EXIT STRATEGY

LUCs/ICs (digging restrictions and no use of the groundwater) will remain in place for the foreseeable future. Since the nature and extent of contamination at the listed sites is expansive and soil removal is cost prohibitive, LUC/ICs are the only practicable solutions for soil contamination. The nature of the COCs at the above listed sites requires extensive time periods to naturally attenuate in Alaska. Unless the contaminated soils are removed from the sites, annual LUC/IC inspection/reporting will be required at these sites for the foreseeable future.

Site ID: FTWW-083
Site Name: RAILROAD OFF LOADING FACILITY
Alias: OU3/1A

STATUS

Regulatory Driver: CERCLA

RRSE: MEDIUM

Contaminants of Concern: Petroleum, Oil and Lubricants (POL)

Media of Concern: Groundwater, Soil

Phases	Start	End
PA.....	198101.....	198112
SI.....	198801.....	199101
RI/FS.....	199209.....	200209
RD.....	199508.....	200210
IRA.....	199106.....	199909
RA(C).....	199608.....	200211
RA(O).....	199709.....	204509
RIP Date:	200211	
RC Date:	204509	

SITE DESCRIPTION

FTWW-083 is part of OU3. The site is located south of the tank farm facility across the Chena River and north of Gaffney Road. Pipes connect FTWW-055 and the ROLF. The facility covers an area of about 40 acres and dates back to 1939. The six sub-sites associated with this source area included the off-loading headers and associated USTs, six valve pits and underground pipelines. Most of the equipment was removed prior to cleanup initiation. During the summer of 1996, approximately 7 inches of floating product was measured in numerous monitoring wells. The findings indicated subsurface contamination existed in hot spots throughout the area, especially along the former pipeline system.

Petroleum contamination was found in subsurface soils and groundwater surrounding Valve Pits A, B and C, along Front Street, and surface and subsurface soils and groundwater in the center of the site. The chosen remedial alternative in the ROD, signed in April 1996, was limited treatment in areas with the highest levels of contamination. Five SVE/AS systems were installed during the summer of 1996, and one system in 1998. Expansion of the systems was determined necessary based on the operations and monitoring. An ESD was completed in September 2002 to address the greater extent of treatment required and the associated increase in costs.

As of 2003, three of the sub-sites achieved remediation goals and were undergoing rebound assessments. The SVE/AS systems were still running at two sub-sites and an AS system was running at another sub-site. In FY04, the systems in certain zones within sub-sites were shut off because the cleanup goals were met. The systems were expanded into other zones to treat newly found hot spots. Two valve pit treatment systems were decommissioned in FY04, and equipment used for the expansion of the remaining zones.

Only one hot spot (Central Header) remained in 2007. In 2007, the system was modified to focus on this area. Rebound studies are being conducted in the remaining areas, and semiannual groundwater monitoring is conducted. Decommissioned SVE/AS system at central header and former Building 1144. Conducted geophysical studies to determine possible sources of hot spot contamination.

In FY12, the majority of the OU3 AS/SVE treatment systems were decommissioned. In 2103, the remaining treatment systems were decommissioned and 32 wells were sampled throughout the site.

The AS/SVE systems have been effective in addressing and substantially reducing groundwater contaminant plumes and achieving ROD objectives within the ROLF; however, areas of gasoline range organics (GRO), DRO and benzene contamination, remain throughout the ROLF site. MNA is currently occurring until Alaska water quality criteria are met.

CLEANUP/EXIT STRATEGY

Site ID: FTWW-083
Site Name: RAILROAD OFF LOADING FACILITY
Alias: OU3/1A

ROD cleanup goals for groundwater have been met. Rebound studies will continue in areas where active treatment is no longer taking place, and monitoring requirements will be reviewed as sampling indicates results at or below action levels. Groundwater monitoring requirements will be evaluated at least yearly, and parameters and frequency will be decreased as appropriate. Groundwater will continue to be monitored for Alaska water quality standards. LUCs restricting soil disturbing activities and groundwater use will remain in place.

Site ID: FTWW-084
Site Name: FEP Milepost 2.7 and 3.0
Alias: OU3/1A

STATUS

Regulatory Driver: CERCLA

RRSE: HIGH

Contaminants of Concern: Petroleum, Oil and Lubricants (POL)

Media of Concern: Groundwater, Soil

Phases	Start	End
PA.....	198101.....	198112
SI.....	198801.....	199101
RI/FS.....	199209.....	199509
RD.....	199509.....	200009
IRA.....	199608.....	199708
RA(C).....	199608.....	200009
RA(O).....	199709.....	204509
RIP Date:	200009	
RC Date:	204509	

SITE DESCRIPTION

FTWW-084 is part of OU3. The source areas at Pipeline Mileposts 2.7 and 3.0 are located at the base of the abandoned Birch Hill USTs, east of the tank farm facility, on the eastern side of Birch Hill. Previous operations at an abandoned TFS contaminated the soil and groundwater in this area. Petroleum-related contamination was detected at various locations to a depth of 15 feet below ground surface (bgs).

The source area at Pipeline Milepost 15.75 (the intersection of Laurance Road and Robyn Drive) was caused by a spill that occurred in August 1989, when a portion of the Fairbanks-Eielson Pipeline was ruptured during road construction. An SVE/AS system was installed and has remediated this site. This system was removed and was used at FTWW-055. These wells were all decommissioned in 2007. LTM was on a five-year schedule; however, the signed five-year review noted this site as NFA.

The mileposts 2.7 and 3.0 RI was completed in 1996. Benzene and petroleum were detected well above cleanup levels in soil and groundwater. A treatability study, which included SVE/AS and oxygen releasing compounds, was not effective due to the nature of the soils (permafrost, tight claylike soil) in the area. Approximately 10,000 cy of soil at the mileposts were removed for ex situ treatment and disposal. In situ LTM continues at the actual milepost sites. Overall contaminant levels show no indication of decrease. Levels of benzene remain significantly above RAOs.

An ESD was completed in September 2002, to document the changes in treatment and associated increased costs. Additional wells were installed to characterize the extent of contamination. No active remediation is planned, assuming the site conditions remain stable. The CLOSES evaluation was completed in June 2004. It recommended continued groundwater monitoring and a wetlands survey every five years. The survey was conducted in 2005 and indicated no impact to the wetlands downgradient of either site.

The Army has noted an increase in benzene levels at this source area and has initiated a contract SI/RI to conduct a data gap analysis under site FTWW-064 Birch Hill Tank Farm UST to determine the cause/source this increase.

Normal monitoring will continue through the investigation.

CLEANUP/EXIT STRATEGY

A five-year monitoring frequency was agreed upon by all agencies in 2010. Yearly site inspections will take place to ensure site integrity and compliance with LUCs/ICs. Wells will be replaced as needed for the monitoring events because of extreme permafrost-jacking damage. Frequency and parameters will be reviewed by all agencies prior to monitoring events.

Site ID: FTWW-085
Site Name: UST, BLDG 5110
Alias: UST-LTM/3A

STATUS

Regulatory Driver: CERCLA

RRSE: LOW

Contaminants of Concern: Petroleum, Oil and Lubricants (POL)

Media of Concern: Groundwater, Soil

Phases	Start	End
PA.....	198101.....	198112
SI.....	198101.....	198112
RI/FS.....	199205.....	199310
RD.....	199310.....	199409
IRA.....	199005.....	199510
RA(C).....	199605.....	199702
RA(O).....	199706.....	204509
RIP Date:	199706	
RC Date:	204509	

SITE DESCRIPTION

One UST (No. 317) was located near Building 5110, the former Range Control Building, south of the Richardson Highway. The UST has been removed. Fuel was delivered to an apparently disconnected fill pipe several times over a two to three year period. Potentially contaminated soil was removed and free-product was observed in the groundwater encountered in the bottom of the excavation. Further investigations indicated that discontinuous permafrost had substantially reduced the ability of the COCs to migrate. Product recovery was attempted in 1994 with limited success.

Picket wells, installed between the source and the post boundary, were monitored. They are no longer sampled annually since they have been "non-detect" since their installation. Although levels remain above action levels, no receptors or migration have been identified. The site has been monitored annually, except for 2002 due to contractual issues.

The site was sampled again in August 2003. The plume appears stable. A CLOSES evaluation was completed in FY04 which recommended sampling every five years. Sampling was conducted in 2005 and 2010. ADEC acceptance letter dated April 24, 2012 requires ICs.

CLEANUP/EXIT STRATEGY

Monitoring will be conducted on a five-year schedule; the next sampling event will be in 2020. Wells will be replaced as necessary to perform groundwater monitoring. Frequency and parameters will be evaluated after each sampling event. LUCs/ICs (digging restrictions and no use of the groundwater) will remain in place for the foreseeable future.

Site ID: FTWW-086
Site Name: UST, BLDG 3562
Alias: NFA

STATUS

Regulatory Driver: RCRA

RRSE: LOW

Contaminants of Concern: Petroleum, Oil and Lubricants (POL)

Media of Concern: Groundwater, Soil

Phases	Start	End
ISC.....	198101.....	198112
INV.....	198101.....	198112
CAP.....	199205.....	199310
IRA.....	199006.....	199207
IMP(C).....	199406.....	199609
IMP(O).....	199609.....	201706

RIP Date: 199609

RC Date: 201707

SITE DESCRIPTION

The SVE/AS system was installed at FTWW-086 in 1996. The contaminant levels dropped and the state of Alaska agreed to shut down the system in 1998. The SVE/AS was subsequently moved to FTWW-094. LUCs include dig permit requirements, groundwater and zoning restrictions, and LTM. They are included in the master plan and the GIS database. Closure requirements have been met.

Recent excavation activities adjacent to this site encountered contaminated soils. Fixed-Lab results confirmed that COCs in the soil exceeded regulatory limits. As a result, this site was reopened under LTM-only in FY 2013 to create a mechanism by which funds can be obtained to maintain the LUC/ICs and properly manage contaminated soil should it become necessary to exhume more in the future.

Since contaminant levels do not pose an unreasonable risk for human health or the environment, self-imposed LUC/ICs are a practicable solution for the soil contamination. These control measures will ensure that this site is tracked by the appropriate Installation personnel so that all future soil disturbing activities are designed properly to protect construction workers as well as residents and other personnel in the immediate area. The LUC/ICs will also help ensure that contaminated media are handled, containerized, and disposed of in accordance with all federal, state, and local statutes and regulations.

USAEC and the installation agreed that all costs for LTM-only sites will be documented under FTWW-026.

Based on the 2014 USAEC program review the installation will find the ADEC letter dated December 2009 to determine if ICs are required. If not the LTM phase will be closed.

ADEC recently sent a letter to the Garrison Command informing them that the state of Alaska considers this a contaminated site requiring investigation and clean-up. The results of this investigation will determine if future work will be required.

CLEANUP/EXIT STRATEGY

LUCs/ICs (digging restrictions and no use of the groundwater) will remain in place for the foreseeable future. The garrison will submit a request for additional investigations as funding becomes available.

Since the nature and extent of contamination at the listed sites is expansive and soil removal is cost prohibitive, LUC/ICs are the only practicable solutions for soil contamination. The nature of the COCs at the above listed sites requires extensive time periods to naturally attenuate in Alaska. Unless the contaminated soils are removed from the sites, annual LUC/IC inspection/reporting will be required at these sites for the foreseeable future.

Site ID: FTWW-087
Site Name: UST, BLDG 2111 & 2112
Alias: USTR/2A

STATUS

Regulatory Driver: CERCLA

RRSE: MEDIUM

Contaminants of Concern: Petroleum, Oil and Lubricants (POL)

Media of Concern: Groundwater, Soil

Phases	Start	End
PA.....	198101.....	198112
SI.....	198101.....	198112
RI/FS.....	199205.....	199510
IRA.....	199406.....	199511
RA(C).....	199506.....	199607
RA(O).....	199607.....	204509

RIP Date: 199607

RC Date: 204510

SITE DESCRIPTION

This site consisted of seven USTs (50,000-gallon) and two aircraft refueling systems located at Buildings 2111 and 2112 next to Taxiway 17. During the summer of 1996, Buildings 2111 and 2112 were demolished, and the leaking USTs along with associated piping were removed. An AS system was installed to address high levels of benzene contamination in groundwater.

In 2003, negotiations with the ADEC resulted in an agreement to focus on hot spots, and turn off treatment in areas where levels are below action numbers. In addition, AS wells were successfully refurbished to increase air flow. The system was modified in 2005 to optimize airflow in the system.

In 2006, the systems were shut off due to an electrical failure. The systems were decommissioned in FY10. A rebound evaluation was initiated in August 2006 and continued through 2010. Contaminant trends indicate an increase in benzene concentrations in treatment areas 2 and 4. An ultra violet optical screening tool survey to further delineate areas of contamination was completed in FY09 as well as an in situ injection of oxygen stimulating compounds at treatment area 4 to see if benzene reduction can be achieved. In October 2010, a second ISCR (RegenOx) was injected, and third injection in November 2011.

Groundwater monitoring for MNA continues to assess the efficiency of the chemical injections and to assess changes in contaminant levels.

Based on the USAEC 2014 program review, the installation will provide ADEC with a letter on treatability study. MNA via groundwater monitoring will be required until ADEC and the Army come to agreement that COCs have dropped to sufficient levels. ICs will remain in place until contamination is below ADEC migration to groundwater levels.

CLEANUP/EXIT STRATEGY

The LTM plan, exit strategy, and CLOSES have been developed and will be implemented. Monitoring requirements will be decreased over time. The AS/SVE systems and unused or damaged monitoring wells have been decommissioned. All new and existing wells have been flush mounted due to current airfield requirements. ISCR (RegenOX) shows promise, and groundwater monitoring will continue. LUCs/ICs will be maintained for the groundwater and soil.

Site ID: FTWW-094

Site Name: FORMER QRTMASTER'S FUELING SYS-EAST/WEST

Alias: OU5/1A

STATUS

Regulatory Driver: CERCLA

RRSE: HIGH

Contaminants of Concern: Petroleum, Oil and Lubricants (POL), Volatiles (VOC)

Media of Concern: Groundwater, Soil

Phases	Start	End
PA.....	198701.....	198712
SI.....	198709.....	198712
RI/FS.....	199502.....	199903
RD.....	199708.....	200009
IRA.....	199609.....	199807
RA(C).....	199709.....	200109
RA(O).....	199709.....	204509
RIP Date:	200109	
RC Date:	204510	

SITE DESCRIPTION

This site has three components: East Quartermaster's Fueling System (EQFS), West Quartermaster's Fueling System (WQFS), and the OU5 site-wide assessment.

The WQFS, covering approximately 50 acres, is located between Front Street and Gaffney Road. The WQFS is characterized by a benzene plume that ran from the northern boundary of the taxiway to the Chena River. Initial groundwater samples collected indicated presence of DRO, GRO, TCE, and benzene contamination. An RI was completed in 1995.

The EQFS, located between Front Street and Gaffney Road, covering approximately 40 acres. During a UST release investigation at EQFS, gasoline and diesel groundwater contamination were encountered. Sampling in 1989 and 1992 showed petroleum and solvent contamination in the soil and groundwater. In 1994, a comprehensive evaluation of the EQFS was conducted. The groundwater data identified several small plumes (fuels and solvents), and the soil data confirmed solvent contamination. The RI was completed in 1996.

The OU5-wide assessment allows for newly discovered petroleum contaminated sites to be included in OU5 as they are discovered.

Several treatability studies (TS) were initiated at EQFS and WQFS. Chosen alternatives in the April 1999 ROD included SVE/AS, potential in situ soil heating in hot spots, potential operation of a downgradient AS trench, groundwater monitoring, natural attenuation, and long-term monitoring. The TS implemented as final remedial actions were the AS curtain in WQFS2, and AS/SVE in other areas of the WQFS. The systems were augmented and refurbished as necessary. A draft CLOSES evaluation was conducted on the WQFS site in 2002. This report recommended shutting down systems as remedial goals were reached or the systems were no longer cost effective. All systems have been turned off for rebound evaluations except for the AS curtain system. The AS curtain operation will be evaluated yearly.

An AS/SVE system was installed at East Building 1060. Chosen alternatives in the OU5 ROD included continued operation of the SVE/AS system, groundwater monitoring, and MNA. The East Building 1060 system reduced the hot spot to below-action levels and was relocated to the west side of Building 1060 in 2000 to address solvent contamination in that area. An electric oxidizer was installed at this site for off-gas vapor treatment. Indoor air sampling in Building 1060 showed no intrusion of contaminant vapors and the oxidizer was shut off in FY04. Operation of the AS/SVE system continued through FY05, and a rebound study is completed. The system was decommissioned in FY09.

Groundwater contaminant concentrations addressed by MNA have generally reached RA goals. Agreement has been reached to continue monitoring on an annual basis. A long-term monitoring optimization (LTMO) evaluation using monitoring and remediation optimization system (MAROS) and first order degradation rate analysis occurred in FY09. The FY11 FFA meeting recommended continued monitoring and operation of the AS Curtain. In FY11, Army decommissioned two SVES systems, performed evaluation on the AS curtain which resulted in a recommendation for ceasing operations and completed hotspot characterization. In FY12, Army started injections at hotspots, shut down the AS curtain, and continues groundwater monitoring. Groundwater contamination monitoring continued through FY15.

Site ID: FTWW-094

Site Name: FORMER QRTMASTER'S FUELING SYS-EAST/WEST

Alias: OU5/1A

The Chena River sparge curtain remediation system suffered mechanical failure. The Army, the USEPA, and ADEC agreed to allow the system to remain inactive while conducting a rebound study in this location. If there is no significant rise in COCs, the Army will propose decommissioning the system at the five-year review; otherwise, the Garrison will have to request significant funding to replace the 20 year old major components of the system to place it back into operation.

The Army continues to maintain a contaminant boom on the Chena River in the immediate vicinity of the sparge curtain system to capture visible sheen from the river bank.

Other alternatives to the AS curtain are being considered due to privatization of the utility systems and a projected higher electrical cost to operate this system.

Ecological impacts on the Chena River due to Army activities were addressed in the OU5/Post-Wide Risk Assessment. A sediment monitoring program was initiated to determine impacts Army activities may have had on river life. The Chena River Aquatic Assessment Program (CRAAP) was developed, and included in the OU5 ROD. The program addressed monitoring changes to the river now that the RA were in place. There have been two sampling events under this program; the latest was completed in 2002. Results of this assessment remained largely inconclusive. No further sampling has been agreed to under the CRAAP.

Treatability studies mentioned above that were implemented in WQFS include the WQFS2/3 sites, the use of oxygen releasing compounds which operated from 1996 to 1998, with limited success; a treatability study in WQFS1, using radio frequency and six-phase soil heating to enhance biodegradation and volatilization, completed with mixed success. The decision was made that it would not be cost effective for treatment of a greater area. In 1997, a 600-foot horizontal AS and SVE treatability study began in the WQFS1 area. A metal retaining structure, originally installed to prevent fuel from flowing to the river, was replaced by an AS curtain in 1998 for the WQFS2 area. Bench scale tracer and biodegradation studies were conducted to better understand the persistence of the contamination. Groundwater modeling was conducted to better determine groundwater movement and contaminant transport and RA effects on the Chena River.

CLEANUP/EXIT STRATEGY

A boom is placed into the Chena River during the summer in conjunction with the AS curtain operation to prevent any potential migration of contaminants.

A determination that no further sampling under the CRAAP for OU5 site-wide was agreed to during the five-year review process and is documented in the final September 2006 five-year review document.

During pre-construction investigations for a utility expansion project, DRO was found to exceed ADEC levels. Additional investigations are warranted.

LUCs/ICs (digging restrictions and no use of the groundwater) will remain in place for the foreseeable future.

Site ID: FTWW-096

Site Name: BIRCH HILL ABOVE GROUND STORAGE TANKS

Alias: OU5/2A

STATUS

Regulatory Driver: CERCLA

RRSE: MEDIUM

Contaminants of Concern: Metals

Media of Concern: Soil

Phases	Start	End
PA.....	198109.....	198109
SI.....	198109.....	199109
RI/FS.....	199110.....	199903
RA(C).....	199903.....	200705
RA(O).....	201103.....	204509

RIP Date: 201103

RC Date: 204509

SITE DESCRIPTION

The Birch Hill Tank Farm (BHTF) includes a total of 18 large volume aboveground fuel storage tanks (AST) over 110 acres. Two tanks are in the Birch Hill Fuel Terminal area. Leakage from the tanks and spills during filling combined with lead contamination resulted in lead and POL contaminated soil near the tanks. The ASTs were taken out of service in the mid-1980s, but were not removed or demolished. The entire area is fenced and the fence is inspected annually to ensure integrity. At the time of the ROD, cleanup for lead-contaminated soil was not approved; however, as a result of a risk assessment in 1994, lead contamination was determined to be of a degree that may pose a hazard to children. In 1995, an FS developed RA goals, established cleanup levels, and evaluated cleanup alternatives; however, in 1996, the site was transferred to OU5 for deferred RA review and selection.

A design analysis in 1997 focused on the soil washing alternative. This alternative, the recognized danger to site workers from lead, and the transfer of this site to OU5, led to the decision in the 1999 OU5 ROD which approved the RA of ICs/LUCs as the final remedy for this site. The ICs/LUCs include signs, fencing, dig permit requirements, zoning restrictions (surface contamination), and inclusion in the post master plan and GIS databases. Subsequent annual and five-year reviews approved of the continued usage of ICs to control contamination on this site.

In 2005 an investigation was completed that delineated the lead in the soil. Lead levels in the soil range up to 14,500 parts per million (ppm); therefore, while the contaminated soil can be removed to terminate ICs/LUCs, the significant cost requirement mandated moving this action to the out-years.

Due to the proximity of BHTF to an adjacent city cemetery, the US Department of Veterans Affairs (VA) expressed interest in creating a VA cemetery in this location. Inquiries had been made into having this property [BHTF] delisted with the National Parks Service as historical; however, the change in land use for this parcel has been reconsidered by higher headquarters as being non-feasible for use as a veteran cemetery.

The Facilities Reduction Program demolished the ASTs, Truckfill Stand, and surface piping in the spring of 2015. The adjacent contaminated soil will be removed.

All parties agree the removal will not require an ESD at this time.

CLEANUP/EXIT STRATEGY

LUCs will remain in place until the tanks and other infrastructure are removed and the contaminated soil can be remediated. The only costs that may be incurred will be for fencing repairs, signage, and LUCs/ICs. Since the nature and extent of contamination at the listed sites is expansive and soil removal is cost prohibitive, LUC/ICs are the only practicable solutions for soil contamination. The nature of the COCs at the above listed sites requires extensive time periods to naturally attenuate in Alaska. Unless the contaminated soils are removed from the sites, annual LUC/IC inspection/reporting will be required at these sites for the foreseeable future.

Site ID: FTWW-097
Site Name: UST, BLD 1168
Alias: UST/3A/NFA

STATUS

Regulatory Driver: CERCLA

RRSE: LOW

Contaminants of Concern: Petroleum, Oil and Lubricants (POL), Volatiles (VOC)

Media of Concern: Soil

Phases	Start	End
PA.....	199409.....	199409
SI.....	199409.....	199409
RI/FS.....	199508.....	199508
RD.....	199505.....	199508
IRA.....	199409.....	199409
RA(C).....	199509.....	200102
RA(O).....	199510.....	200906
LTM.....	200907.....	204409

RIP Date: 200102

RC Date: 200906

SITE DESCRIPTION

Building 1168 has two areas: a dry well (oil/water separator), which is being addressed under the three party FFA, OU2 for soil and groundwater contamination (FTWW-072) and UST 213 (FTWW-097).

One UST (No. 213) was located near former Building 1168, a vehicle storage facility/motor pool. UST 213, along with the associated piping, was removed in 1994. DRO was detected in the groundwater. In 1995, an SVE/AS system was installed as a TS to address groundwater contamination at this source area.

In 2001 contamination levels decreased to levels where the system could be turned off and it was decommissioned in 2003. Monitoring indicated consecutive events where levels were below cleanup action requirements.

No further monitoring is required at this site; however, ICs remain in place. These include groundwater, dewatering and digging restrictions. These ICs will be monitored through FTWW-072, an active ER,A site.

Based on a June 2009 letter from ADEC, this site is closed with ICs.

CLEANUP/EXIT STRATEGY

LUCs/ICs (digging restrictions and no use of the groundwater) will remain in place for the foreseeable future. Since the nature and extent of contamination at the site is expansive and soil removal is cost prohibitive, LUC/ICs are the only practicable solutions for soil contamination. The nature of the COCs at the site requires extensive time periods to naturally attenuate in Alaska. Unless the contaminated soils are removed, annual LUC/IC inspection/reporting will be required for the foreseeable future.

Site ID: FTWW-099
Site Name: UST, BLD 3564
Alias: USTR/2A

STATUS

Regulatory Driver: CERCLA
RRSE: MEDIUM
 Contaminants of Concern: Petroleum, Oil and Lubricants (POL)
 Media of Concern: Groundwater, Soil

Phases	Start	End
PA.....	199408.....	199408
SI.....	199408.....	199408
RI/FS.....	199508.....	199601
IRA.....	199408.....	199408
RA(C).....	199603.....	199606
RA(O).....	199606.....	204410
RIP Date:	199606	
RC Date:	204410	

SITE DESCRIPTION

In 1994, two 25,000-gallon USTs were removed from this site and replaced with one 10,000-gallon UST at former Building 3564. This building, demolished in 1999, was a standby generator plant located upgradient of the post's drinking water supply wells. The extent of petroleum contamination in the soil and groundwater was defined in the site assessment report.

An AS/SVE treatment system was installed in 1996, and attenuation measured. In 2000, it was determined levels had reached the point where system operation was no longer cost-effective. The system was shut off permanently, and decommissioned and moved in 2001.

Monitoring results post-system decommissioning have shown some rebound above MCLs, but not in the areas of former active treatment. Annual monitoring will continue until a downward trend has occurred and cleanup levels have been met for two consecutive events. The frequency and parameters of monitoring will be evaluated on an annual basis.

LUCs are restricted to industrial use.

CLEANUP/EXIT STRATEGY

Annual monitoring will continue until a downward trend has occurred and cleanup levels have been met for two consecutive events. The frequency and parameters of monitoring will be evaluated on an annual basis. The Army will request to reduce sampling to every five years at the five-year review.

LUCs/ICs (digging restrictions and no use of the groundwater) will remain in place for the foreseeable future.

Since the nature and extent of contamination at the listed sites is expansive, and soil removal is cost prohibitive, LUC/ICs are the only practicable solutions for soil contamination. The nature of the contaminants of concern at the above listed sites requires extensive time-periods to naturally attenuate in Alaska. Unless the contaminated soils are removed from the sites, annual LUC/IC inspection/reporting will be required at these sites for the foreseeable future.

Site ID: FTWW-100
Site Name: BLD 2250 residual POL contamination
Alias: USTR/3A

STATUS

Regulatory Driver: CERCLA

RRSE: LOW

Contaminants of Concern: Petroleum, Oil and Lubricants (POL)

Media of Concern: Groundwater, Soil

Phases	Start	End
PA.....	198101.....	198101
SI.....	199203.....	199302
RI/FS.....	199509.....	199509
IRA.....	199408.....	199408
RA(C).....	199509.....	200909
RA(O).....	199509.....	204410
RIP Date:	200909	
RC Date:	204410	

SITE DESCRIPTION

A UST associated with Building 2250 was removed in summer 1994. The only contamination identified was DRO in the soil and groundwater.

In September 1995, an SVE system was installed to treat contamination believed to be associated with the UST. The system was turned off in May 2004; however, recent data has shown an increase in the contaminant levels in an untreated area of this site. A ROST investigation was conducted to delineate the remaining area of contamination. The ROST results determined that remaining subsurface contamination was confined to a limited area.

The plume appears stable and not increasing; however, ADEC regulations require continued monitoring every five years to ensure the plume remains stable. The SVE/AS system was decommissioned in FY11.

Currently, the site remains in RA(O) /MNA with continued five-year groundwater sampling.

CLEANUP/EXIT STRATEGY

ICs are in place to include land and groundwater use and dig permit requirements. Residual contamination will be monitored on a five-year schedule as agreed to with the state. Frequency and parameters will be negotiated after each sampling event.

LUCs/ICs (digging restrictions and no use of the groundwater) will remain in place for the foreseeable future.

Site ID: FTWW-101
Site Name: NEELY ROAD POL POINT Bldg 3570
Alias: 2P/1A

STATUS

Regulatory Driver: CERCLA

RRSE: HIGH

Contaminants of Concern: Petroleum, Oil and Lubricants (POL), Volatiles (VOC)

Media of Concern: Groundwater, Soil

Phases	Start	End
PA.....	200106.....	200108
RI/FS.....	200109.....	200409
RA(C).....	200506.....	200509
RA(O).....	200510.....	204509

RIP Date: 200510

RC Date: 204510

SITE DESCRIPTION

In May 2001, during foundation excavation for a veterinary clinic at this site, approximately 15 cy of contaminated soil was removed and stockpiled on site, and later removed for off site thermal treatment. In 2002, a limited RI was conducted. Laboratory analysis confirmed the contamination as primarily benzene, PCE, and GRO above ADEC levels in soil and groundwater. In fall 2003, additional contamination delineation, using ROST technology, was completed. A small scale AS/SVE system was installed during the 2005 field season. During 2006, additional modifications were made to optimize the system. In November 2006, the system was shut down due to mechanical problems.

The system was reevaluated and expansion was required to increase system effectiveness. Two additional wells were installed in FY10. In FY11, extensive repairs were completed to the system and multiple wells were repaired.

In FY12, the Army affected repairs to the existing system, installed additional wells and expanded the SVE/AS system to improve system performance and contaminate degradation.

The SVE/AS system was shut down in December 2013 to begin a rebound study. If COCs do not rebound, the Army will recommend decommissioning the system at the five-year review. LUC/ICs will remain in effect for the foreseeable future.

CLEANUP/EXIT STRATEGY

If COCs do not rebound, the Army will recommend decommissioning the system at the five-year review.

LUCs/ICs (digging restrictions and no use of the groundwater) will remain in place for the foreseeable future.

Site ID: FTWW-102
Site Name: FORMER COMMUNICATION SITE
Alias: TakuGarden

STATUS

Regulatory Driver: CERCLA

RRSE: HIGH

Contaminants of Concern: Petroleum, Oil and Lubricants (POL), Volatiles (VOC)

Media of Concern: Groundwater, Soil

Phases	Start	End
PA.....	200503.....	200508
RI/FS.....	200509.....	201401
RD.....	201402.....	201504
IRA.....	200509.....	201212
RA(C).....	201501.....	201604
RA(O).....	201506.....	204509
RIP Date:	201604	
RC Date:	204509	

SITE DESCRIPTION

This site was discovered during a housing construction project in 2005. Significant historical photo research has determined it is a former communication site containing antenna arrays, barracks, and administrative buildings. It also appears that a portion of the site was a military disposal site. The geophysical surveys indicated numerous areas of scattered debris, as well as several concentrated areas of buried debris. The site covers approximately 54 acres. The following potential contaminants of concern have been detected at this site to date: metals, furans, dioxins, chlorinated benzenes, chlorinated phenols, pesticides, PCBs, discarded military munitions, MEC, cyclotrimethylenetrinitramine (RDX), solvents, and POL. In addition, significant piles of metal debris were uncovered and removed. This site is adjacent to an existing housing development and a school age services facility. Upon discovery of PCB contamination in 2005, construction work was temporarily suspended to allow for further assessment.

Extensive sampling indicated that the spread of PCB contamination was limited to a small portion of the construction site. A wipe sample grid of the entire construction site was conducted for PCBs, and temporary monitoring wells were installed. Adjacent houses were sampled, as well as playgrounds and the adjacent School Age Services facility. In 2005 and 2006 more than 180 cy of PCB-contaminated soils were disposed of at a TSDF, and several thousand tons of metal debris including discarded military munitions (DMM) were removed. Geophysical surveys suggest that substantial metal debris amounts remained. Once it was determined that the high PCB contamination was localized (in 2005), the area was permanently fenced and construction work resumed at levels sufficient to allow winterization of the site.

All PCB contaminated soil greater than one ppm was removed from the site. In 2006, construction resumed as agreed to by the Army, ADEC, and USEPA. A site-wide investigation, to include sampling to depth (2005 sampling was generally surface sampling, six inches and above) and groundwater monitoring, was completed by the end of October 2006. Results were used to develop an RI plan.

Geophysics were conducted in FY07 - FY09 to help guide the RI. The following actions took place in FY07:

- Disposal of 3,300 cy of remaining PCB-contaminated soils;
- investigation to identify metals in the following areas - Buildings 1, 3, 11, 12, 15, 17, 19, 22 -25, 35, 48 and 49, Area D and three discrete areas in Area A;
- disposal of approximately 80,000 cy of debris and DMM contaminated soil (which required UXO standby support; and approximately 4,000 cy of POL-contaminated soil piles.

Approximately 11,000 cy of non-serviceable and un contaminated construction soil piles were hauled to the FWA landfill and approximately 367 tons of scrap metal were removed. Eight-hundred thirty-two munitions debris (MD) items were disposed of at a licensed smelter; seven DMM items were removed and destroyed at the FTA Range. Approximately 915 cy of pesticide contaminated soils were sent to a TSDF in Oregon.

An RI was completed March 2010 and FS was completed December 2011. All known contaminants of concern that exceeded ADEC or USEPA risk threshold values were removed to a depth of six feet bgs. FY11 groundwater results indicate the presence of 1,2,3 TCP, TCE, and DRO as the major COCs. An HHRA determined there is no unacceptable risk from soil, groundwater, or soil gas at this site. However, groundwater will require continued monitoring until all COCs are below ADEC water quality

Site ID: FTWW-102

Site Name: FORMER COMMUNICATION SITE

Alias: TakuGarden

standards. In FY12 the Army agreed to conduct sub-slab soil gas sampling under the housing units for five years after occupation to ensure there continues to be no unacceptable risk to occupants. The ROD was signed in Jan 2014 and the RD/RA work plan (WP) was approved May 2015. Continue monitoring per requirements of ROD and RD/RA WP.

The RI/FS will characterize and delineate the contaminated areas, and evaluate potential site risks. Geophysics were conducted in FY07-FY09 to help guide the RI. The following actions took place in FY07:

- disposal of 3300 cy remaining PCB contaminated soils;
- a drum and debris investigation to identify metals in the following areas - Buildings 1, 3, 11, 12, 15, 17, 19, 22-25, 35, 48, and 49, Area D, and three discrete areas in Area A;
- disposal of approximately 80,000 cy of debris and DMM contaminated soil (which required UXO standby support); and
- disposition of approximately 4,000 cy of POL contaminated soil piles.

Approximately 11,000 cy of nonserviceable and non-contaminated construction soil piles were hauled to the FWA landfill; approximately 367 tons of scrap metal were removed, and approximately 267 tons were recycled. 832 MD items were disposed of at licensed smelter; seven DMM items were removed and destroyed at the FWA Range. Over 1,000 drums were removed and properly disposed. Approximately 915 cy of pesticide-contaminated soil was sent to a TSD in Oregon. Further FY09 RI and other cleanup activities and requirements were driven by sampling results. The Army has established the following institutional controls: no intrusive investigation or construction without UXO support; prohibition against drinking water wells; and monitoring of sub-slab soil gas and groundwater. The RI and HHRA have been approved by the USEPA and the ADEC. The ROD was signed Jan. 29, 2014.

CLEANUP/EXIT STRATEGY

The HHRA determined that there were no unacceptable risks at this source area; however, groundwater will require continued monitoring until all COCs are below ADEC water quality standards. In FY12 the Army agreed to conduct sub-slab soil gas sampling under the housing units for five years after construction is complete to ensure there continues to be no unacceptable risk to occupants. Removal actions have been completed, and LUCs are in place. The RD/RA WP is in progress. Real estate actions will commence upon its approval.

Site Closeout (No Further Action) Summary

Site ID	Site Name	NFA Date	Documentation
FTWW-002	MOTOR POOL(BLDG 3485,3487)	199306	DD was dated June 30, 1993, but NFA was further memorialized in the OU5 Record of Decision dated March 31, 1999.
FTWW-003	AIRCRAFT MAIN (BLDG 2077)	201312	
FTWW-004	DEH MAIN SHOP (BLDG 3015)	199604	ADEC CLOSURE LETTER
FTWW-005	AUTO HOBBY SHOP (BLDG 1053, 1054)	199511	DD was dated Nov. 30, 1995, but NFA was further memorialized in the OU5 Record of Decision dated March 31, 1999.
FTWW-007	EQUIP MAIN FACILITY (BLDG 3489)	198112	NO ACTION-FFA NEGOTIATIONS
FTWW-008	PAINT SHOP (BLDG 3022)	198112	NO ACTION-FFA NEGOTIATIONS
FTWW-010	LAUNDRY (BLDG 3025)	198112	NO ACTION-FFA NEGOTIATIONS
FTWW-016	SHOPS (BLDG 1595)	199112	
FTWW-017	SHOP (BLDG 1553)	198112	NO ACTION-FFA NEGOTIATIONS
FTWW-018	PHOTO SHOP (BLDG 3009)	198112	NO ACTION-FFA NEGOTIATIONS
FTWW-019	NORTH POINT POL (BLDG 1565)	199505	
FTWW-020	POWER PLANT 2 (BLDG 1561)	198808	NO ACTION-FFA NEGOTIATIONS
FTWW-021	DARK ROOM (BLDG 1045)	198112	NO ACTION-FFA NEGOTIATIONS
FTWW-025	FORT WAINWRIGHT MANEUVER AREA W/RANGES	198112	NO ACTION-FFA NEGOTIATIONS
FTWW-027	PESTICIDE STGE (BLDG 4072)	198112	NO ACTION-FFA NEGOTIATIONS
FTWW-028	PCB SPILL IN BUILDING 3568	198112	NO ACTION-FFA NEGOTIATIONS
FTWW-048	RAILROAD STORAGE YARD	199208	DD was dated Aug. 31, 1992, but NFA was further memorialized in the OU1 Record of Decision dated June 27, 1997.
FTWW-049	CONTAMINATED SOIL PILE(POWER PLANT)	199509	ADEC CLOSURE LETTER
FTWW-051	UST, BLD 3423 (269,#270)	199603	ADEC CLOSURE LETTER
FTWW-052	UST, BLG 3015 (264, #265)	199001	
FTWW-053	UST, BLG 1956(#325)	199101	ADEC CLOSURE LETTER
FTWW-054	UST, BLDG 4109 (#299)	199101	ADEC CLOSURE LETTER
FTWW-056	UST, BLDG 3481(#275,#276)	200706	Conditional Closure with IC
FTWW-058	UST,BLDG 4057,(#303)	199505	ADEC CLOSURE LETTER
FTWW-059	UST, BLDG 4065 (#305,#304)	198112	ADEC CLOSURE LETTER
FTWW-060	UST, BLDG 4247 (#309)	199311	ADEC CLOSURE LETTER
FTWW-062	UST,BLDG 1546(227,228,229,230,231,232,23	200008	
FTWW-065	FLY ASH POND	199012	DD was dated Dec. 31, 1990, but NFA was further memorialized in the OU1 Record of Decision dated June 27, 1997.
FTWW-066	BEACON TOWER LANDFILL	199211	DD was dated Nov. 30, 1992, but NFA was further memorialized in the OU1 Record of Decision dated June 27, 1997.
FTWW-068	OPEN BURNING/OPEN RETONATION	199803	OU5-Delayed RCRA Closure
FTWW-069	WATER TREATMENT PLANT SETTLING POND	199001	NFA OU1 ROD
FTWW-070	FORMER EOD RANGE, ALPHA IMPACT AREA	199410	DD was dated Oct. 31, 1994, but NFA was

Site Closeout (No Further Action) Summary

Site ID	Site Name	NFA Date	Documentation
			further memorialized in the OU5 Record of Decision dated March 31, 1999.
FTWW-071	TRAINOR GATE RAILROAD SPUR	199201	NFA OU1 ROD
FTWW-073	NIKE SITES B & C CLEANUP	199411	Not CERCLA eligible
FTWW-074	LF adjacent to DRMO	199610	
FTWW-075	BIRCH HILL RADIOACTIVE SITE	199303	DD was dated March 31, 1993, but NFA was further memorialized in the OU1 Record of Decision dated June 27, 1997.
FTWW-076	GOLF COURSE PESTICIDE SHED - 2250	199511	
FTWW-077	BLDG 1567	199306	
FTWW-078	TAR SITES	199309	DD was dated Sept. 30, 1993, but NFA was further memorialized in the OU2 Record of Decision dated March 31, 1997.
FTWW-080	DRUMS SOUTH OF LANDFILL	199407	
FTWW-081	NORTH POST PIPELINE BREAK -Site 3	199309	COMBINED WITH FTWW-050. No formal documentation.
FTWW-082	CHEMICAL AGENT DUMP SITE	199510	OU1 Interim Action ROD
FTWW-088	UST, BLDG 1060	199008	
FTWW-089	UST, BLDG 3425	199706	Conditional Closure with IC
FTWW-090	UST, BLDG 3479	199410	ADEC CLOSURE LETTER
FTWW-091	DRMO POL SITES	200309	
FTWW-092	TRANSFORMER EAST OF BLDG 3019	199410	DD was dated Oct. 31, 1994, but NFA was further memorialized in the OU1 Record of Decision dated June 27, 1997.
FTWW-093	FARMER'S LOOP PERMANFROST STATION	199612	Conditional Closure with IC
FTWW-095	UST, BLD 1002	200911	November 2009 Closure Letter
FTWW-098	UST, BLD 1172	201001	

IRP Schedule

Date of IRP Inception: 198101

Past Phase Completion Milestones

1981

PA (FTWW-096 - BIRCH HILL ABOVE GROUND STORAGE TANKS, FTWW-100 - BLD 2250 residual POL contamination)

1982

ISC (FTWW-054 - UST, BLDG 4109 (#299), FTWW-059 - UST, BLDG 4065 (#305,#304), FTWW-061 - UST, BLDG 5004,(UST 310), FTWW-086 - UST, BLDG 3562, FTWW-088 - UST, BLDG 1060, FTWW-089 - UST, BLDG 3425, FTWW-090 - UST, BLDG 3479, FTWW-091 - DRMO POL SITES)

SI (FTWW-003 - AIRCRAFT MAIN (BLDG 2077), FTWW-004 - DEH MAIN SHOP (BLDG 3015), FTWW-024 - BLAIR LAKES DISPOSAL SITE, FTWW-026 - PESTICIDE STG (BLDG 1599), FTWW-037 - FIRE FIGHTING TRAINING AREA, FTWW-038 - FT. WAINWRIGHT LANDFILL PLUME, FTWW-047 - DRMO SALVAGE YARD, FTWW-073 - NIKE SITES B & C CLEANUP, FTWW-085 - UST, BLDG 5110, FTWW-087 - UST, BLDG 2111 & 2112, FTWW-092 - TRANSFORMER EAST OF BLDG 3019, FTWW-093 - FARMER'S LOOP PERMANFROST STATION)

INV (FTWW-059 - UST, BLDG 4065 (#305,#304), FTWW-061 - UST, BLDG 5004,(UST 310), FTWW-086 - UST, BLDG 3562, FTWW-088 - UST, BLDG 1060, FTWW-089 - UST, BLDG 3425, FTWW-090 - UST, BLDG 3479, FTWW-091 - DRMO POL SITES)

PA (FTWW-001 - MOTOR POOL (BLDG 3421,3425), FTWW-002 - MOTOR POOL(BLDG 3485,3487), FTWW-003 - AIRCRAFT MAIN (BLDG 2077), FTWW-004 - DEH MAIN SHOP (BLDG 3015), FTWW-005 - AUTO HOBBY SHOP (BLDG 1053, 1054), FTWW-007 - EQUIP MAIN FACILITY (BLDG 3489), FTWW-008 - PAINT SHOP (BLDG 3022), FTWW-010 - LAUNDRY (BLDG 3025), FTWW-017 - SHOP (BLDG 1553), FTWW-018 - PHOTO SHOP (BLDG 3009), FTWW-019 - NORTH POINT POL (BLDG 1565), FTWW-020 - POWER PLANT 2 (BLDG 1561), FTWW-021 - DARK ROOM (BLDG 1045), FTWW-023 - DYKE RANGE, FTWW-024 - BLAIR LAKES DISPOSAL SITE, FTWW-025 - FORT WAINWRIGHT MANEUVER AREA W/RANGES, FTWW-026 - PESTICIDE STG (BLDG 1599), FTWW-027 - PESTICIDE STGE (BLDG 4072), FTWW-028 - PCB SPILL IN BUILDING 3568, FTWW-037 - FIRE FIGHTING TRAINING AREA, FTWW-038 - FT. WAINWRIGHT LANDFILL PLUME, FTWW-047 - DRMO SALVAGE YARD, FTWW-048 - RAILROAD STORAGE YARD, FTWW-072 - OIL WATER SEPARATOR AT BLDG 1168, FTWW-073 - NIKE SITES B & C CLEANUP, FTWW-083 - RAILROAD OFF LOADING FACILITY, FTWW-084 - FEP Milepost 2.7 and 3.0, FTWW-085 - UST, BLDG 5110, FTWW-087 - UST, BLDG 2111 & 2112, FTWW-092 - TRANSFORMER EAST OF BLDG 3019, FTWW-093 - FARMER'S LOOP PERMANFROST STATION)

1987

PA (FTWW-062 - UST,BLDG 1546(227,228,229,230,231,232,23))

1988

IRA (FTWW-024 - BLAIR LAKES DISPOSAL SITE)

INV (FTWW-051 - UST, BLD 3423 (269,#270), FTWW-058 - UST,BLDG 4057,(#303))

SI (FTWW-094 - FORMER QRTMASTER'S FUELING SYS-EAST/WEST)

PA (FTWW-081 - NORTH POST PIPELINE BREAK -Site 3, FTWW-094 - FORMER QRTMASTER'S FUELING SYS-EAST/WEST)

ISC (FTWW-051 - UST, BLD 3423 (269,#270), FTWW-052 - UST, BLG 3015 (264, #265), FTWW-053 - UST, BLG 1956(#325), FTWW-057 - UST, BLDG 3483(#277,#278), FTWW-058 - UST,BLDG 4057,(#303), FTWW-063 - UST, BLDG 1514 (#221,222,223,224))

RA(C) (FTWW-020 - POWER PLANT 2 (BLDG 1561))

1989

IMP(C) (FTWW-051 - UST, BLD 3423 (269,#270))

PA (FTWW-067 - 801 DRUM BURIAL SITE)

IRA (FTWW-004 - DEH MAIN SHOP (BLDG 3015))

CAP (FTWW-051 - UST, BLD 3423 (269,#270))

1990

ISC (FTWW-064 - BIRCH HILL TANK FARM UST#345-350)

DES (FTWW-052 - UST, BLG 3015 (264, #265))

IRP Schedule

SI	(FTWW-068 - OPEN BURNING/OPEN RETONATION, FTWW-070 - FORMER EOD RANGE, ALPHA IMPACT AREA)
PA	(FTWW-068 - OPEN BURNING/OPEN RETONATION, FTWW-069 - WATER TREATMENT PLANT SETTLING POND, FTWW-070 - FORMER EOD RANGE, ALPHA IMPACT AREA, FTWW-071 - TRAINOR GATE RAILROAD SPUR)
INV	(FTWW-052 - UST, BLG 3015 (264, #265))
CAP	(FTWW-052 - UST, BLG 3015 (264, #265), FTWW-088 - UST, BLDG 1060)
IRA	(FTWW-052 - UST, BLG 3015 (264, #265), FTWW-056 - UST, BLDG 3481(#275,#276), FTWW-057 - UST, BLDG 3483(#277,#278), FTWW-058 - UST, BLDG 4057, (#303), FTWW-061 - UST, BLDG 5004, (UST 310), FTWW-088 - UST, BLDG 1060)
IMP(C)	(FTWW-052 - UST, BLG 3015 (264, #265))
1991	
ISC	(FTWW-049 - CONTAMINATED SOIL PILE(POWER PLANT), FTWW-060 - UST, BLDG 4247 (#309))
SI	(FTWW-050 - NORTH POST SITE, FTWW-055 - FAIRBANKS FUEL TERMINAL, FTWW-083 - RAILROAD OFF LOADING FACILITY, FTWW-084 - FEP Milepost 2.7 and 3.0, FTWW-096 - BIRCH HILL ABOVE GROUND STORAGE TANKS, FTWW-098 - UST, BLD 1172)
INV	(FTWW-053 - UST, BLG 1956(#325), FTWW-054 - UST, BLDG 4109 (#299), FTWW-060 - UST, BLDG 4247 (#309))
PA	(FTWW-050 - NORTH POST SITE, FTWW-055 - FAIRBANKS FUEL TERMINAL, FTWW-065 - FLY ASH POND, FTWW-066 - BEACON TOWER LANDFILL, FTWW-082 - CHEMICAL AGENT DUMP SITE, FTWW-098 - UST, BLD 1172)
IRA	(FTWW-053 - UST, BLG 1956(#325), FTWW-054 - UST, BLDG 4109 (#299), FTWW-062 - UST, BLDG 1546(227,228,229,230,231,232,23, FTWW-063 - UST, BLDG 1514 (#221,222,223,224), FTWW-098 - UST, BLD 1172)
1992	
ISC	(FTWW-056 - UST, BLDG 3481(#275,#276))
INV	(FTWW-049 - CONTAMINATED SOIL PILE(POWER PLANT))
SI	(FTWW-011 - POWER PLANT COAL STORAGE YARD (BLDG3595), FTWW-048 - RAILROAD STORAGE YARD, FTWW-067 - 801 DRUM BURIAL SITE, FTWW-071 - TRAINOR GATE RAILROAD SPUR, FTWW-082 - CHEMICAL AGENT DUMP SITE)
PA	(FTWW-011 - POWER PLANT COAL STORAGE YARD (BLDG3595), FTWW-016 - SHOPS (BLDG 1595), FTWW-074 - LF adjacent to DRMO, FTWW-075 - BIRCH HILL RADIOACTIVE SITE, FTWW-076 - GOLF COURSE PESTICIDE SHED - 2250, FTWW-077 - BLDG 1567, FTWW-078 - TAR SITES, FTWW-079 - ENGINEER PARK DRUM SITE, FTWW-080 - DRUMS SOUTH OF LANDFILL)
IRA	(FTWW-086 - UST, BLDG 3562)
1993	
INV	(FTWW-057 - UST, BLDG 3483(#277,#278), FTWW-063 - UST, BLDG 1514 (#221,222,223,224), FTWW-064 - BIRCH HILL TANK FARM UST#345-350)
SI	(FTWW-001 - MOTOR POOL (BLDG 3421,3425), FTWW-002 - MOTOR POOL(BLDG 3485,3487), FTWW-062 - UST, BLDG 1546(227,228,229,230,231,232,23, FTWW-066 - BEACON TOWER LANDFILL, FTWW-072 - OIL WATER SEPARATOR AT BLDG 1168, FTWW-074 - LF adjacent to DRMO, FTWW-075 - BIRCH HILL RADIOACTIVE SITE, FTWW-076 - GOLF COURSE PESTICIDE SHED - 2250, FTWW-077 - BLDG 1567, FTWW-078 - TAR SITES, FTWW-081 - NORTH POST PIPELINE BREAK -Site 3, FTWW-100 - BLD 2250 residual POL contamination)
RA(C)	(FTWW-077 - BLDG 1567)
DES	(FTWW-049 - CONTAMINATED SOIL PILE(POWER PLANT))
IRA	(FTWW-074 - LF adjacent to DRMO, FTWW-079 - ENGINEER PARK DRUM SITE, FTWW-080 - DRUMS SOUTH OF LANDFILL, FTWW-081 - NORTH POST PIPELINE BREAK -Site 3, FTWW-090 - UST, BLDG 3479, FTWW-093 - FARMER'S LOOP PERMANFROST STATION)
CAP	(FTWW-057 - UST, BLDG 3483(#277,#278))

IRP Schedule

1994

SI (FTWW-079 - ENGINEER PARK DRUM SITE, FTWW-080 - DRUMS SOUTH OF LANDFILL, FTWW-095 - UST, BLD 1002, FTWW-097 - UST, BLD 1168, FTWW-099 - UST, BLD 3564)

CAP (FTWW-056 - UST, BLDG 3481(#275,#276), FTWW-060 - UST, BLDG 4247 (#309), FTWW-061 - UST, BLDG 5004,(UST 310), FTWW-086 - UST, BLDG 3562)

IRA (FTWW-011 - POWER PLANT COAL STORAGE YARD (BLDG3595), FTWW-064 - BIRCH HILL TANK FARM UST#345-350, FTWW-072 - OIL WATER SEPARATOR AT BLDG 1168, FTWW-095 - UST, BLD 1002, FTWW-097 - UST, BLD 1168, FTWW-099 - UST, BLD 3564, FTWW-100 - BLD 2250 residual POL contamination)

PA (FTWW-095 - UST, BLD 1002, FTWW-097 - UST, BLD 1168, FTWW-099 - UST, BLD 3564)

DES (FTWW-057 - UST, BLDG 3483(#277,#278))

IMP(C) (FTWW-057 - UST, BLDG 3483(#277,#278), FTWW-060 - UST, BLDG 4247 (#309))

INV (FTWW-056 - UST, BLDG 3481(#275,#276))

RD (FTWW-072 - OIL WATER SEPARATOR AT BLDG 1168, FTWW-085 - UST, BLDG 5110)

RA(C) (FTWW-062 - UST, BLDG 1546(227,228,229,230,231,232,23))

RI/FS (FTWW-062 - UST, BLDG 1546(227,228,229,230,231,232,23), FTWW-072 - OIL WATER SEPARATOR AT BLDG 1168, FTWW-073 - NIKE SITES B & C CLEANUP, FTWW-085 - UST, BLDG 5110)

1995

CAP (FTWW-089 - UST, BLDG 3425, FTWW-091 - DRMO POL SITES)

RA(C) (FTWW-072 - OIL WATER SEPARATOR AT BLDG 1168, FTWW-073 - NIKE SITES B & C CLEANUP, FTWW-095 - UST, BLD 1002)

IMP(C) (FTWW-049 - CONTAMINATED SOIL PILE(POWER PLANT))

RI/FS (FTWW-084 - FEP Milepost 2.7 and 3.0, FTWW-095 - UST, BLD 1002, FTWW-097 - UST, BLD 1168, FTWW-100 - BLD 2250 residual POL contamination)

SI (FTWW-019 - NORTH POINT POL (BLDG 1565))

RD (FTWW-095 - UST, BLD 1002, FTWW-097 - UST, BLD 1168)

1996

RI/FS (FTWW-004 - DEH MAIN SHOP (BLDG 3015), FTWW-011 - POWER PLANT COAL STORAGE YARD (BLDG3595), FTWW-037 - FIRE FIGHTING TRAINING AREA, FTWW-038 - FT. WAINWRIGHT LANDFILL PLUME, FTWW-055 - FAIRBANKS FUEL TERMINAL, FTWW-082 - CHEMICAL AGENT DUMP SITE, FTWW-087 - UST, BLDG 2111 & 2112, FTWW-098 - UST, BLD 1172, FTWW-099 - UST, BLD 3564)

RA(C) (FTWW-037 - FIRE FIGHTING TRAINING AREA, FTWW-087 - UST, BLDG 2111 & 2112, FTWW-098 - UST, BLD 1172, FTWW-099 - UST, BLD 3564)

IMP(C) (FTWW-056 - UST, BLDG 3481(#275,#276), FTWW-086 - UST, BLDG 3562)

CAP (FTWW-064 - BIRCH HILL TANK FARM UST#345-350)

SI (FTWW-005 - AUTO HOBBY SHOP (BLDG 1053, 1054))

IRA (FTWW-055 - FAIRBANKS FUEL TERMINAL, FTWW-082 - CHEMICAL AGENT DUMP SITE, FTWW-085 - UST, BLDG 5110, FTWW-087 - UST, BLDG 2111 & 2112)

1997

IRA (FTWW-084 - FEP Milepost 2.7 and 3.0, FTWW-089 - UST, BLDG 3425, FTWW-091 - DRMO POL SITES)

RA(C) (FTWW-011 - POWER PLANT COAL STORAGE YARD (BLDG3595), FTWW-038 - FT. WAINWRIGHT LANDFILL PLUME, FTWW-085 - UST, BLDG 5110)

IMP(C) (FTWW-091 - DRMO POL SITES)

RD (FTWW-011 - POWER PLANT COAL STORAGE YARD (BLDG3595), FTWW-038 - FT. WAINWRIGHT LANDFILL PLUME, FTWW-047 - DRMO SALVAGE YARD)

RI/FS (FTWW-003 - AIRCRAFT MAIN (BLDG 2077), FTWW-026 - PESTICIDE STG (BLDG 1599), FTWW-047 - DRMO SALVAGE YARD, FTWW-050 - NORTH POST SITE, FTWW-067 - 801 DRUM BURIAL SITE, FTWW-074 - LF adjacent to DRMO)

1998

IRA (FTWW-050 - NORTH POST SITE, FTWW-067 - 801 DRUM BURIAL SITE, FTWW-094 - FORMER)

	QRTMASTER'S FUELING SYS-EAST/WEST)
RA(C)	(FTWW-047 - DRMO SALVAGE YARD)
RD	(FTWW-050 - NORTH POST SITE)
RI/FS	(FTWW-068 - OPEN BURNING/OPEN RETONATION)
1999	
IRA	(FTWW-083 - RAILROAD OFF LOADING FACILITY)
RI/FS	(FTWW-094 - FORMER QRTMASTER'S FUELING SYS-EAST/WEST, FTWW-096 - BIRCH HILL ABOVE GROUND STORAGE TANKS)
2000	
RD	(FTWW-084 - FEP Milepost 2.7 and 3.0, FTWW-094 - FORMER QRTMASTER'S FUELING SYS-EAST/WEST)
RA(C)	(FTWW-084 - FEP Milepost 2.7 and 3.0)
RA(O)	(FTWW-062 - UST, BLDG 1546(227,228,229,230,231,232,23))
CAP	(FTWW-063 - UST, BLDG 1514 (#221,222,223,224))
2001	
PA	(FTWW-101 - NEELY ROAD POL POINT Bldg 3570)
RD	(FTWW-003 - AIRCRAFT MAIN (BLDG 2077), FTWW-055 - FAIRBANKS FUEL TERMINAL, FTWW-067 - 801 DRUM BURIAL SITE)
RA(C)	(FTWW-055 - FAIRBANKS FUEL TERMINAL, FTWW-067 - 801 DRUM BURIAL SITE, FTWW-094 - FORMER QRTMASTER'S FUELING SYS-EAST/WEST, FTWW-097 - UST, BLD 1168)
2002	
RI/FS	(FTWW-083 - RAILROAD OFF LOADING FACILITY)
2003	
RD	(FTWW-083 - RAILROAD OFF LOADING FACILITY)
IMP(O)	(FTWW-091 - DRMO POL SITES)
RA(O)	(FTWW-011 - POWER PLANT COAL STORAGE YARD (BLDG3595))
RA(C)	(FTWW-083 - RAILROAD OFF LOADING FACILITY)
2004	
RI/FS	(FTWW-101 - NEELY ROAD POL POINT Bldg 3570)
RA(C)	(FTWW-003 - AIRCRAFT MAIN (BLDG 2077))
2005	
PA	(FTWW-102 - FORMER COMMUNICATION SITE)
RA(C)	(FTWW-101 - NEELY ROAD POL POINT Bldg 3570)
2007	
LTM	(FTWW-056 - UST, BLDG 3481(#275,#276))
RA(C)	(FTWW-096 - BIRCH HILL ABOVE GROUND STORAGE TANKS)
2009	
RA(O)	(FTWW-097 - UST, BLD 1168)
RA(C)	(FTWW-100 - BLD 2250 residual POL contamination)
2010	
RA(O)	(FTWW-095 - UST, BLD 1002, FTWW-098 - UST, BLD 1172)
2013	
IMP(O)	(FTWW-057 - UST, BLDG 3483(#277,#278))
IRA	(FTWW-102 - FORMER COMMUNICATION SITE)
RA(C)	(FTWW-050 - NORTH POST SITE)

IRP Schedule

2014

RI/FS (FTWW-102 - FORMER COMMUNICATION SITE)
RA(O) (FTWW-003 - AIRCRAFT MAIN (BLDG 2077), FTWW-050 - NORTH POST SITE)
PA (CC-FTWW-114 - Drum Site West of DRMO)

2015

RD (FTWW-102 - FORMER COMMUNICATION SITE)

Projected Phase Completion Milestones

See attached schedule

Projected Record of Decision (ROD)/Decision Document (DD) Approval Dates

Site ID	Site Name	ROD/DD Title	ROD/DD Date
FTWW-101	NEELY ROAD POL POINT Bldg 3570	Neely Road FTWW-101	20160901

Final RA(C) Completion Date: 201604

Schedule for Next Five-Year Review: 2016

Estimated Completion Date of IRP at Installation (including LTM phase): 204510

FORT WAINWRIGHT IRP Schedule

= phase underway

SITE ID	SITE NAME	PHASE	FY17	FY18	FY19	FY20	FY21	FY22+
CC-FTWW-114	Drum Site West of DRMO	SI						
SITE ID	SITE NAME	PHASE	FY17	FY18	FY19	FY20	FY21	FY22+
FTWW-001	MOTOR POOL (BLDG 3421,3425)	LTM						
SITE ID	SITE NAME	PHASE	FY17	FY18	FY19	FY20	FY21	FY22+
FTWW-011	POWER PLANT COAL STORAGE YARD (BLDG3595)	LTM						
SITE ID	SITE NAME	PHASE	FY17	FY18	FY19	FY20	FY21	FY22+
FTWW-023	DYKE RANGE	SI						
SITE ID	SITE NAME	PHASE	FY17	FY18	FY19	FY20	FY21	FY22+
FTWW-024	BLAIR LAKES DISPOSAL SITE	RI/FS						
SITE ID	SITE NAME	PHASE	FY17	FY18	FY19	FY20	FY21	FY22+
FTWW-026	PESTICIDE STG (BLDG 1599)	LTM						
SITE ID	SITE NAME	PHASE	FY17	FY18	FY19	FY20	FY21	FY22+
FTWW-037	FIRE FIGHTING TRAINING AREA	LTM						
SITE ID	SITE NAME	PHASE	FY17	FY18	FY19	FY20	FY21	FY22+
FTWW-038	FT. WAINWRIGHT LANDFILL PLUME	RA(O)						
SITE ID	SITE NAME	PHASE	FY17	FY18	FY19	FY20	FY21	FY22+
FTWW-047	DRMO SALVAGE YARD	RA(O)						
SITE ID	SITE NAME	PHASE	FY17	FY18	FY19	FY20	FY21	FY22+
FTWW-050	NORTH POST SITE	LTM						
SITE ID	SITE NAME	PHASE	FY17	FY18	FY19	FY20	FY21	FY22+
FTWW-055	FAIRBANKS FUEL TERMINAL	RA(O)						
SITE ID	SITE NAME	PHASE	FY17	FY18	FY19	FY20	FY21	FY22+
FTWW-057	UST, BLDG 3483(#277,#278)	LTM						
SITE ID	SITE NAME	PHASE	FY17	FY18	FY19	FY20	FY21	FY22+
FTWW-061	UST, BLDG 5004,(UST 310)	LTM						
SITE ID	SITE NAME	PHASE	FY17	FY18	FY19	FY20	FY21	FY22+
FTWW-063	UST, BLDG 1514 (#221,222,223,224)	LTM						
SITE ID	SITE NAME	PHASE	FY17	FY18	FY19	FY20	FY21	FY22+
FTWW-064	BIRCH HILL TANK FARM UST#345-350	LTM						
SITE ID	SITE NAME	PHASE	FY17	FY18	FY19	FY20	FY21	FY22+
FTWW-067	801 DRUM BURIAL SITE	RA(O)						
SITE ID	SITE NAME	PHASE	FY17	FY18	FY19	FY20	FY21	FY22+
FTWW-072	OIL WATER SEPARATOR AT BLDG 1168	RA(O)						
SITE ID	SITE NAME	PHASE	FY17	FY18	FY19	FY20	FY21	FY22+
FTWW-079	ENGINEER PARK DRUM SITE	LTM						
SITE ID	SITE NAME	PHASE	FY17	FY18	FY19	FY20	FY21	FY22+
FTWW-083	RAILROAD OFF LOADING FACILITY	RA(O)						
SITE ID	SITE NAME	PHASE	FY17	FY18	FY19	FY20	FY21	FY22+
FTWW-084	FEP Milepost 2.7 and 3.0	RA(O)						
SITE ID	SITE NAME	PHASE	FY17	FY18	FY19	FY20	FY21	FY22+
FTWW-085	UST, BLDG 5110	RA(O)						
SITE ID	SITE NAME	PHASE	FY17	FY18	FY19	FY20	FY21	FY22+
FTWW-086	UST, BLDG 3562	IMP(O)						

FORT WAINWRIGHT IRP Schedule

SITE ID	SITE NAME	PHASE	FY17	FY18	FY19	FY20	FY21	FY22+
FTWW-087	UST, BLDG 2111 & 2112	RA(O)						
SITE ID	SITE NAME	PHASE	FY17	FY18	FY19	FY20	FY21	FY22+
FTWW-094	FORMER QRTMASTER'S FUELING SYS-EAST/WEST	RA(O)						
SITE ID	SITE NAME	PHASE	FY17	FY18	FY19	FY20	FY21	FY22+
FTWW-096	BIRCH HILL ABOVE GROUND STORAGE TANKS	RA(O)						
SITE ID	SITE NAME	PHASE	FY17	FY18	FY19	FY20	FY21	FY22+
FTWW-097	UST, BLD 1168	LTM						
SITE ID	SITE NAME	PHASE	FY17	FY18	FY19	FY20	FY21	FY22+
FTWW-099	UST, BLD 3564	RA(O)						
SITE ID	SITE NAME	PHASE	FY17	FY18	FY19	FY20	FY21	FY22+
FTWW-100	BLD 2250 residual POL contamination	RA(O)						
SITE ID	SITE NAME	PHASE	FY17	FY18	FY19	FY20	FY21	FY22+
FTWW-101	NEELY ROAD POL POINT Bldg 3570	RA(O)						
SITE ID	SITE NAME	PHASE	FY17	FY18	FY19	FY20	FY21	FY22+
FTWW-102	FORMER COMMUNICATION SITE	RA(O)						

FORT WAINWRIGHT
Army Defense Environmental Restoration Program
Military Munitions Response Program

MMRP Summary

Installation Total Army Environmental Database-Restoration (AEDB-R) Sites/Closeout Sites Count: 15/11

Installation Site Types with Future and/or Underway Phases

- 3 Small Arms Range
(FTWW-001-R-01, FTWW-002-R-01, FTWW-004-R-01)
- 1 Unexploded Munitions/Ordnance
(FTWW-008-R-01)

Most Widespread Contaminants of Concern

Munitions and explosives of concern (MEC), Munitions constituents (MC)

Media of Concern

Groundwater, Soil

Completed Remedial Actions (Interim Remedial Actions/ Final Remedial Actions (IRA/FRA))

Site ID	Site Name	Action	Remedy	FY
N/A				

Duration of MMRP

Date of MMRP Inception 200203

Estimated Date for Remedy-In-Place (RIP)/Response Complete (RC): 202009/202009

Date of MMRP completion including Long Term Management (LTM): 202009

MMRP Contamination Assessment

Contamination Assessment Overview

The preliminary assessment (PA) was completed at all sites in 2003. An SI was completed for all sites in June 2009. The installation has completed the RI/FS on four sites, and NFA is planned. The RI/FS in progress for one site is expected to be complete by 2017, and follow-on phases/actions will be performed as required.

In 2015, a contract to complete the RI for three of the four MMRP sites was awarded with a scheduled completion date of 2017. The Bombing Area from FWA to Greely (FTWW-008-R-01) as well as Dyke Range and the Blair Lakes sites will be pursued under a different contract.

Cleanup Exit Strategy

The RI/FS will continue for the site recommended by the final SI for further action to determine extent of contamination and update inventory and future liabilities. In areas where necessary, additional on-site evaluations will occur to ensure safety of the area.

MMRP Previous Studies

	Title	Author	Date
2002	Closed Transferring and Transferred Range/Site Inventory Report Fort Wainwright, Alaska	TechLaw, Inc.	SEP-2002
2013	Technical Memorandum, Former Bombing Range near Blair Lakes Site	Jacobs Engineering	JAN-2013
	Site Visit Small Arms Complex, Fort Wainwright, Alaska	Jacobs Engineering	JUL-2013
2014	2011 Training Area 105 Construction Support AAR (Final)	Jacobs Engineering	APR-2014
	2011 Birch Hill Cross Country Ski Trails After Action Report	Jacobs Engineering	JUN-2014
2015	Former Bombing Area Between Fort Wainwright and Fort Greely, PSE	Jacobs Engineering	FEB-2015

FORT WAINWRIGHT
Military Munitions Response Program
Site Descriptions

Site ID: FTWW-001-R-01

Site Name: TA-105

Alias: None

STATUS

Regulatory Driver: CERCLA

MRSPP Score: 06

Contaminants of Concern: Munitions and explosives of concern (MEC), Munitions constituents (MC)

Media of Concern: Groundwater, Soil

Phases	Start	End
PA.....	200203.....	200305
SI.....	200509.....	200906
RI/FS.....	200910.....	201712

RIP Date: N/A

RC Date: 201712

SITE DESCRIPTION

This is a closed training area, still owned by the US Army, comprising 373 acres in the southeastern part of the cantonment area. It lies partially within the golf course with the remainder outside of the installation security fence. Small arms and pyrotechnics were expended at this training range, which was used from approximately 1941 to 1971.

The SI was completed in June 2009. The RI investigation was completed in FY10. All known anomalies with the potential to be MD were investigated and removed. Additional investigation activities were conducted in FY11 to support construction of a security fence around the entire area. The security fence was installed to prevent illegal dumping on this former munitions response site (MRS).

The PP and ROD will be completed as part of the SI/RI contract in FY15.

CLEANUP/EXIT STRATEGY

Based on the findings within the RI completed in FY12, this MRS is recommended for NFA. A finalized RI document is anticipated.

Site ID: FTWW-002-R-01

Site Name: TA-101

Alias: None

STATUS

Regulatory Driver: CERCLA

MRSPP Score: 06

Contaminants of Concern: Munitions and explosives of concern (MEC), Munitions constituents (MC)

Media of Concern: Groundwater, Soil

Phases	Start	End
PA.....	200203.....	200305
SI.....	200509.....	200906
RI/FS.....	200910.....	201712

RIP Date: N/A

RC Date: 201712

SITE DESCRIPTION

This is a closed training area, still owned by the US Army, comprising 388.5 acres in the southwestern part of the cantonment area where residential development is taking place. Small arms and pyrotechnics were expended at this training range, which was used from approximately 1942 to 1972.

The SI was completed in June 2009. The RI was completed in FY10. All known anomalies that could have been MD were investigated. No MEC were found.

The PP and ROD will be completed as part of the SI/RI contract. This contract has been fully funded and additional funding is not anticipated.

CLEANUP/EXIT STRATEGY

Based on the findings within the RI completed in FY12, this MRS is recommended for NFA. A finalized RI document is anticipated.

Site ID: FTWW-004-R-01
Site Name: ARCTIC SURVIVAL AREA--SKI SLOPE

Alias: None

STATUS

Regulatory Driver: CERCLA

MRSPP Score: 05

Contaminants of Concern: Munitions and explosives of concern (MEC), Munitions constituents (MC)

Media of Concern: Groundwater, Soil

Phases	Start	End
PA.....	200203.....	200305
SI.....	200509.....	200906
RI/FS.....	200910.....	201712

RIP Date: N/A

RC Date: 201712

SITE DESCRIPTION

This is a closed range, still owned by the Army, comprising 137.4 acres in the northern portion of the cantonment area where a recreational ski slope now exists. Small arms and pyrotechnics were expended at this training range, which was used as a range from approximately 1942 to 1958. The range was located on Birch Hill, but its precise location is unknown.

The site is currently used as a recreational area with opportunities for military units to schedule ski training.

The PP and ROD will be completed as part of the SI/RI contract in FY15. This contract has been fully funded and additional funding is not anticipated.

CLEANUP/EXIT STRATEGY

Based on the findings within the RI completed in FY12, this MRS is recommended for NFA. A finalized RI document is anticipated.

Site ID: FTWW-008-R-01

Site Name: BOMBING FROM WAINWRIGHT TO GREELY

Alias: Range

STATUS

Regulatory Driver: CERCLA

MRSPP Score: Evaluation pending

Contaminants of Concern: Munitions and explosives of concern (MEC)

Media of Concern: Soil

Phases	Start	End
PA.....	200203.....	200305
SI.....	200509.....	200906
RI/FS.....	200910.....	202009

RIP Date: N/A

RC Date: 202009

SITE DESCRIPTION

This aerial bombing and gunnery range was originally leased from the Alaska Territorial Governor during WWII and used until the early 1970's as a range facility for the Army and Air Force until it was transferred to the State of Alaska in 1973. The area is comprised of 475,902.8 acres of State of Alaska owned wetlands, swamps, small lakes, streams, rivers, and uplands between FWA and Fort Greely. Bombs and rockets were dropped and fired either as part of training runs, or by WWII American and Russian pilots trying to lighten their loads due to in-flight emergencies during WWII. Note: in early-1941 Congress approved the Lend-Lease Program, which enabled the US to transfer arms and equipment to any nation deemed vital to the defense of the US. One of the equipment transfer routes was from Alaska to Siberia, and FWA (then LAAF) was a critical link in that route. The dates that this area was used for bombing predated the independent US Air Force. At that time, the US Army Air Corps handled such flights. This range was also used for various other training between 1942 and 1973. These other training exercises resulted in rockets, small arms, and pyrotechnics being expended throughout the entire area. This area is currently undeveloped, except for a few homestead cabins, small mining operations, and hunting, fishing, and trapping guides.

Light Detecting and Ranging (LIDAR), aerial mapping, testing was conducted in FY10. Upon review of the data, the Army conducted preliminary source evaluations in 2012 to ground truth potential target/impact areas. During the Feb 2015 FFA meeting, the Army and ADEC agreed to reduce the area being investigated in the RI to the Target Area MRS (5,853.5 acres) located south of the FWA Tanana Flats Training Area boundary. The Non-Target Area MRS makes up the remainder of the west and east portions of the Former Bombing Area and covers approximately 470,048.3 acres.

A Draft RI planning document has been generated (via a USACE Alaska District Contract) and is scheduled to be sent to the USEPA and ADEC. The EPA has expressed its first interest in this site in August 2015 and will become an active participant in this process.

The Draft Planning document provides the results of all work completed to date and provides a plan for completion of an RI effort. The Army anticipates the RI will begin in FY17. Following the RI, the Army will complete the CERCLA process to attain a DD. Due to the sheer size and remote nature of this site there are no plans for a removal action. The Army and State of Alaska anticipate using public outreach/ notifications as the final action.

Based on the results of the final SI in June 2009, further investigation was recommended. Site investigations conducted in FY12 confirmed target areas and potential receptors.

CLEANUP/EXIT STRATEGY

An RI/FS planning effort was commenced in FY14 and it is anticipated that the RI will commence in FY16.

The Army anticipates that public outreach efforts and potentially some signage will be the final action for this area.

Site Closeout (No Further Action) Summary

Site ID	Site Name	NFA Date	Documentation
FTWW-003-R-01	TA-107	200906	Based on the Final SI report dated June 2009, this MRS is recommended for NFA.
FTWW-005-R-01	MACHINE GUN SQUARE	200703	During the HRR, the Machine Gun Square was determined to consist of a building. Because indoor ranges are excluded from the MMRP, this site is not MMRP eligible.
FTWW-006-R-01	NE ARCTIC INDOCTRINATION AREA	200606	During the HRR this site was determined to be an existing FUDS site and is being addressed under the FUDS program.
FTWW-007-R-01	YUKON RIVER	200906	Based on the Final SI report dated June 2009, this MRS is recommended for NFA.
FTWW-009-R-01	SOLID WASTE LANDFILL	200909	Based on the Final SI report dated June 2009, this MRS is recommended for NFA under the MMRP.
FTWW-010-R-01	DTA RIFLE RANGE	201010	
FTWW-011-R-01	MISSILE RANGE	200906	Based on the Final SI report dated June 2009, this MRS is recommended for NFA.
FTWW-012-R-01	HAND GRENADE COMPLEX	200906	Based on the Final SI report dated June 2009, this MRS is recommended for NFA.
FTWW-013-R-01	BAYONET ASSAULT COURSE	200906	Based on the Final SI report dated June 2009, this MRS is recommended for NFA.
FTWW-014-R-01	Airfield Firing-in-Butt	200906	Based on the Final SI report dated June 2009, this MRS is recommended for NFA.
FTWW-015-R-01	Pistol Range	200906	Based on the Final SI report dated June 2009, this MRS is recommended for NFA.

MMRP Schedule

Date of MMRP Inception 200203

Past Phase Completion Milestones

2003

PA (FTWW-001-R-01 - TA-105, FTWW-002-R-01 - TA-101, FTWW-003-R-01 - TA-107, FTWW-004-R-01 - ARCTIC SURVIVAL AREA--SKI SLOPE, FTWW-005-R-01 - MACHINE GUN SQUARE, FTWW-006-R-01 - NE ARCTIC INDOCTRINATION AREA, FTWW-007-R-01 - YUKON RIVER, FTWW-008-R-01 - BOMBING FROM WAINWRIGHT TO GREELY, FTWW-009-R-01 - SOLID WASTE LANDFILL, FTWW-010-R-01 - DTA RIFLE RANGE, FTWW-011-R-01 - MISSILE RANGE, FTWW-012-R-01 - HAND GRENADE COMPLEX, FTWW-013-R-01 - BAYONET ASSAULT COURSE, FTWW-014-R-01 - Airfield Firing-in-Butt, FTWW-015-R-01 - Pistol Range)

2009

SI (FTWW-001-R-01 - TA-105, FTWW-002-R-01 - TA-101, FTWW-003-R-01 - TA-107, FTWW-004-R-01 - ARCTIC SURVIVAL AREA--SKI SLOPE, FTWW-007-R-01 - YUKON RIVER, FTWW-008-R-01 - BOMBING FROM WAINWRIGHT TO GREELY, FTWW-009-R-01 - SOLID WASTE LANDFILL, FTWW-010-R-01 - DTA RIFLE RANGE, FTWW-011-R-01 - MISSILE RANGE, FTWW-012-R-01 - HAND GRENADE COMPLEX, FTWW-013-R-01 - BAYONET ASSAULT COURSE, FTWW-014-R-01 - Airfield Firing-in-Butt, FTWW-015-R-01 - Pistol Range)

2010

RI/FS (FTWW-010-R-01 - DTA RIFLE RANGE)

Projected Phase Completion Milestones

See attached schedule

Projected Record of Decision (ROD)/Decision Document (DD) Approval Dates

To Be Determined

Final RA(C) Completion Date:

Schedule for Next Five-Year Review: 2016

Estimated Completion Date of MMRP at Installation (including LTM phase): 202009

FORT WAINWRIGHT MMRP Schedule

= phase underway

SITE ID	SITE NAME	PHASE	FY17	FY18	FY19	FY20	FY21	FY22+
FTWW-001-R-01	TA-105	RI/FS						
SITE ID	SITE NAME	PHASE	FY17	FY18	FY19	FY20	FY21	FY22+
FTWW-002-R-01	TA-101	RI/FS						
SITE ID	SITE NAME	PHASE	FY17	FY18	FY19	FY20	FY21	FY22+
FTWW-004-R-01	ARCTIC SURVIVAL AREA--SKI SLOPE	RI/FS						
SITE ID	SITE NAME	PHASE	FY17	FY18	FY19	FY20	FY21	FY22+
FTWW-008-R-01	BOMBING FROM WAINWRIGHT TO GREELY	RI/FS						

FORT WAINWRIGHT
Army Defense Environmental Restoration Program
Compliance Restoration

CR Summary

Installation Total Army Environmental Database-Restoration (AEDB-R) Sites/Closeout Sites Count: 16/1

Installation Site Types with Future and/or Underway Phases

- 1 POL (Petroleum/Lubricants) Lines
(CC-FTWW-106)
- 8 Spill Site Area
(CC-FTWW-103, CC-FTWW-105, CC-FTWW-107, CC-FTWW-108, CC-FTWW-109, CC-FTWW-110, CC-FTWW-111, CC-FTWW-113)
- 1 Training and Maneuver Area
(CC-FTWW-112)
- 5 Underground Storage Tank
(CC-FTRS-04, CC-FTWW-01, CC-FTWW-02, CC-FTWW-03, CC-FTWW-104)

Most Widespread Contaminants of Concern

Dioxins/Dibenzofurans, Metals, Pesticides, Petroleum, Oil and Lubricants (POL), Polychlorinated Biphenyls (PCB), Polycyclic Aromatic Hydrocarbons (PAH), Semi-volatiles (SVOC), Volatiles (VOC)

Media of Concern

Groundwater, Sediment, Soil

Completed Remedial Actions (Interim Remedial Actions/ Final Remedial Actions (IRA/FRA))

Site ID	Site Name	Action	Remedy	FY
CC-FTRS-04	Seward Recreation Camp UST/AST Site	IRA	REMOVAL	1996
CC-FTRS-04	Seward Recreation Camp UST/AST Site	IRA	CHEMICAL REDUCTION/OXIDATION	1999
CC-FTRS-04	Seward Recreation Camp UST/AST Site	FRA	INSTITUTIONAL CONTROLS	2000
CC-FTRS-04	Seward Recreation Camp UST/AST Site	FRA	NATURAL ATTENUATION	2000
CC-FTWW-01	Bldg 3598/3595	FRA	OTHER	2010
CC-FTWW-03	Vet Clinic/Boat Shop (Bldgs 2062/2063)	FRA	NATURAL ATTENUATION	2010
CC-FTWW-02	Forward Air Refueling Point (FARP)	FRA	REMOVAL	2011

Duration of CR

Date of CR Inception: 199204

Estimated Date for Remedy-In-Place (RIP)/Response Complete (RC): 202009/204510

Date of CR completion including Long Term Management (LTM): 204510

CR Contamination Assessment

Contamination Assessment Overview

CC-FTWW-103, Aviation Task Force (ATF) is a large area that extends approximately 1,900 yards to the east from the east side of Hangar 3 (Building 3002) to the west side of the newly constructed Aircraft Parts Warehouse (Building 2076), and approximately 300 yards north from the northern shoulder of Montgomery Road to the southern edge of the former South Point Refueling System taxiway.

Historical spills and releases have occurred in this area as a result of normal activities (aircraft parking, maintenance, refueling, re-arming, cargo storage and loading activities, and other related activities) since 1940. The entire area was also used for staging and storing drums of hazardous materials/hazardous waste, dry-goods, equipment, and similar types of products. Due to the sporadic and irregular patterns of contamination encountered, the contaminated areas are assumed to have been caused by accidental spillage during normal activities and not by a single event. Aerial spraying of pesticides throughout the cantonment area was a routine occurrence. It is possible that some of the pesticide contamination encountered in this area was a result of these activities.

There are four specific source areas within this parcel of land that will require additional investigation: Hangar 3 Utilidor Expansion, Building 3004, Former Electronics Maintenance Facility (Building 2104), and Building 2077 Parking Lot.

CC-FTWW-104, Building 3485 is located in the southern portion of the FWA cantonment area, on the northeast corner at the intersection of Chippewa Avenue and Luzon Avenue. This site was part of the area used for refueling Army equipment and machines during the 1940s and 1950s; diesel and gasoline USTs were placed on-site during that period. It is adjacent to a refueling station to the east, battle command training center to the north, and Building 3479, another motor pool, to the west.

During new construction activities, a previously unknown and abandoned quartermaster re-fueling point complete with concrete pump island, three USTs and related piping, an 8-foot by 8-foot underground wooden vault with utility duct were found south and east of Building 3485. Approximately 920 cy of POL and VOC contaminated soils were removed.

Confirmation soil samples collected from both excavations detected POL contamination above the cleanup criteria, while confirmation groundwater samples collected from the fueling station site exceeded cleanup criteria for DRO and VOCs. The areal extent of contamination in either the soil or groundwater has not been fully delineated (Jacobs, 2010a). The site is currently capped with 4 feet of clean non-frost-susceptible (NFS) fill material and a 12-inch reinforced concrete parking facility.

CC-FTWW-105, 336B Barracks site is located on the corner of Montgomery Road and Santiago Avenue. Historical records and aerial photographs taken between 1956 and 1993, indicate the 336B Barracks site was previously the site of five ammunition bunkers. After the bunkers were decommissioned, the area was used as a maneuver/training area for the military.

In April 2009, USACE conducted a pre-construction site investigation, and identified localized soil contamination with VOC, SVOC, and explosives constituents in the northwest corner of the lot, co-located with a former bunker site (USACE, 2009).

In 2010, four AOCs were investigated. Approximately 500 pounds of scrap metal were excavated and removed. Approximately 70 cy of POL-contaminated soil was also removed from the center of the site in response to contamination identified during construction activities. A subsequent geoprobe investigation in this area indicated DRO and SVOC contamination remained in the soil above ADEC cleanup levels. A limited groundwater investigation did not find any contamination exceeding cleanup levels (Jacobs, 2011c).

The CC-FTWW-107, site is located in the southeastern portion of FWA, north from Chippewa Avenue and south of Rhineland Avenue, along the eastern sides of Buildings 3492, 3494, and 3496. The area comprises approximately 15 acres within a parking area that was built sometime between 1986 and 1993.

In 2009, the existing asphalt and structurally unsound fill were removed, and a 12-inch reinforced concrete parking facility with 4 feet of NFS fill was constructed over the entire area. During construction activities, over 3,000 surface and near-surface soil samples were field screened for petroleum contamination using a photoionization detector (PID). Approximately 6,000 cy of soil with elevated PID readings (over 20 ppm) was removed from the site. Elevated PID readings were identified in multiple areas throughout the site, which indicates a multitude of historical spills; however, these investigations focused on areas directly impacted by construction and were limited in scope in terms of the parameters analyzed.

A small area on the northeast corner of Building 3494, and a larger area to the east of this building also had elevated PID readings, as did two areas to the east of Building 3496. None of these areas have been sufficiently investigated for soil

CR Contamination Assessment

Contamination Assessment Overview

contamination, and groundwater was never investigated (S&W, 2009b).

The CC-FTWW-108 site is located outside of the southeast corner of the FWA Vehicle Maintenance Facility (Building 3498), parking lot. The AOC is the former drainage swale/retention area, which is located on the north side of Rhineland Avenue between Luzon Avenue to the west and Eisenhower Road to the east. Water in the retention area generally flows north towards Building 3424 into a retention pond. Gas and diesel powered military equipment is staged in the parking area year round. POL contamination was discovered in the surface and subsurface soils of a former drainage swale during construction of new utilidor/utilities service south of Building 3485. The utility contractor removed contaminated soil from the work area to the limits of the required utilidor excavations and left contamination in the side walls and floor of the excavations. The drainage swale was not characterized during the utility construction activities.

CC-FTWW-109 is located within FWA OU5 approximately one block south of the Chena River. From the 1940s to 1986, the site was used as a motor vehicle and equipment maintenance and repair shop and an equipment warm storage. Subsequently, Building 1054 was converted into a temporary emergency/fire response station and Fire Chief and Fire Safety Office. Shortly thereafter, it permanently became Fire Station No. 3.

During demolition of the south section of Building 1054. POL and lead-contaminated soils were found at the northern corner of Building 1054, along the northwest side of Building 1054, and beneath the footprint of the northeast section of Building 1054. Approximately 35 cy of contaminated soil was excavated from the northern corner and footprint of the building. However, sample results indicated that contaminated soils remained on the northwest side of the building footprint.

Two locations on the eastern edge next to the building and the southern edge of the excavation contained contaminated soil exceeding the ADEC migration-to-groundwater cleanup criteria for DRO (Jacobs, 2011d). Soil associated with these exceedances remains at the site. Groundwater has not been monitored at this site. The parking area adjacent to Building 1054 is planned for expansion. Also, a communications tower located adjacent to the site is scheduled to be replaced. These changes in land use could affect future investigations in this area.

CC-FTWW-110, is a recently renovated and re-purposed office building located northwest of the intersection of Montgomery Rd and Engineer Way. Building 3014 was originally designed and built in the mid-1970s to be a Self-Help Center for housing residents and Troop-Unit Self-Help personnel and a small engine repair facility. It was constructed adjacent to, but was not part of, the OU1 Building 3015 drum storage site. It had a gravel parking area and an outdoor storage area that was uncovered and fenced. The area was used to store yard equipment, small quantities of fertilizers, house-hold repair parts, paints, and similar substances.

In 2010, while conducting utility location activities contaminated soil was encountered at the southeast corner of Building 3014. Analytical sample results from two test pits indicated concentrations of GRO, DRO, several VOCs (1,2,4-trimethylbenzene, 1,3,5-trimethylbenzene, ethylbenzene, naphthalene, n-propylbenzene, 2-methylnaphthalene, and xylenes), and SVOCs (2-methylnaphthalene and naphthalene) above the ADEC cleanup criteria. Confirmation sample results indicate DRO contamination exceeds ADEC cleanup criteria in two other locations. These soils remain in place due to their proximity to buried utilities (Jacobs, 2013c). Groundwater has not been investigated at the site.

The CC-FTWW-111 site is located northeast of 10th Street and Missouri Road. Activities performed at this site were in response to the construction of the Montgomery Road extension. Historical aerial photographs indicate that extensive warehousing activities occurred near the proposed Montgomery Road extension. Rows of drums stored on a gravel pad for many years suggest the potential for buried drums and POL and chlorinated compound-contaminated soil.

There are two AOCs at this site: contaminated soils associated with the Montgomery Road extension and a sewage treatment facility vault. The Montgomery Road site samples collected from surface soil (1 foot bgs) during test pitting activities had results exceeding ADEC cleanup criteria in two areas near the western end of the road extension. The western-most AOC had exceedances of DRO, residual range organics (RRO), PCE, lead, and benzene, while the other AOC had exceedance of DRO only. Samples collected from subsurface soils (3.5 feet to 16.5 feet bgs) during soil boring activities in these two areas had results exceeding ADEC cleanup criteria for DRO, which was also detected in one groundwater sample at a level slightly exceeding ADEC cleanup criteria (Jacobs, 2011b). The road extension has since been completed (Jacobs, 2012b).

The sewage treatment vault and metal lid were sunk slightly bgs and were covered by thick vegetation. The vault was later identified as an abandoned and buried sewage treatment facility. The vault contained standing water, which was sampled and

CR Contamination Assessment

Contamination Assessment Overview

found to have benzene, lead, DRO, RRO, and PCBs at levels exceeding the ADEC groundwater cleanup levels. The water was removed from the vault and properly disposed. Limited soil and groundwater sampling was conducted in the area directly adjacent to the vault. Although initial sampling did not detect any contaminated soil or groundwater around the vault, the investigation was limited and may need to be expanded to fully characterize the area. An outlet pipe exiting the vault is thought to go to the Chena River but has not been completely mapped or traced, and no samples were collected at the outfall (Jacobs, 2013a). The vault has subsequently been closed.

CC-FTWW-112 is located within Training Area 115, which is in the upper northeast corner of the Installation boundary, and south of the Upper Ammunition Supply Point, but within the explosive safety zone. It is bounded by Birch Hill Road to the south, East Ammo Road to the east, Ammo Road to the north, and Birch Hill Loop to the west. Sage Hill site consists of approximately 280 acres. Department of Public Works (DPW) Environmental personnel inspected the site and found that some drums were lying on the ground, and some had sunk into the permafrost rich silt. The drums were from the late-1940s and 1950s and had previously contained a variety of materials (i.e. oil, pesticides, PCE, and other indiscernible materials).

A closer look at the area revealed approximately 24 smaller items indicating explosive munitions had been in the area. After closer inspection of the area, empty metal and wooden boxes of fuses and detonation caps were found to be co-located with the ammunition cans and drums. The area surrounding these items also had small military wood and canvas shelters in various stages of decay due to age.

Historical photos indicate storage and distribution activities were conducted throughout the area from 1942 to 1959. Historical operational records citing quantities and types of munitions stored and distributed at each point are no longer available at the Installation; however, it is presumed that only conventional ordnance was distributed from these points. It is also presumed that the drums were used to supply the points with fuel for generators, heaters, and other items as well as providing materials to maintain the mini-outposts.

The area is densely wooded and most of the former open storage/distribution points and interconnecting trails have been overgrown by native vegetation. Despite the fact that the source area is on the side of a hill, there are also a significant number of small ponds, swamps, and wetlands throughout the source area. The area is open to troop training, hunters, hikers, off road vehicles (ORV) enthusiasts, and non-military personnel.

No environmental investigations have been conducted in any of these areas.

CC-FTWW-113, the Northern Lights site, is a 20-plus acre housing area with 120 new homes. Soldiers occupy approximately 80 of the completed homes and the additional 40 will be occupied as they become available.

During the initial construction phase, the original 1950s era Capehart-Wherry Quarters were demolished and disposed of in the FWA Landfill. The homes still had asbestos and lead associated with the structures. Additionally, contamination was encountered in several areas. The construction site was at this time divided into seven AOCs and investigation activities were conducted. The site investigation activities included 28 characterization samples and 126 confirmations samples collected from all seven areas combined and analyzed for a combination of GRO, DRO, RRO, SVOC, Resource Conservation and Recovery Act (RCRA) metals, and herbicides.

Approximately 1,331 cy of POL-contaminated soil, 75 cy of POL/benzene-contaminated soil, and 15 cy of VOC contaminated soil were thermally treated at Organic Incineration Technology, Inc. in North Pole, Alaska. Investigations at five buildings (B43, B42, B35-36 and B37) reached clean limits. DRO and SVOC contaminated soils remain in place at site B46, and DRO and VOC contaminated soils remain in place at B51. Further investigation is needed at both of these sites to fully characterize and remediate the remaining contamination in the soil and groundwater.

Cleanup Exit Strategy

On Sept. 18, 2014 a contract to conduct environmental investigations on various sites at FWA was awarded with the objective to perform site investigations and/or RI at various sites. The period of performance ends June 30, 2017. A follow-on contract will be pursued based upon the path forward recommendations/proposals of the final SI or RI reports.

CR Previous Studies

Title

Author

Date

There are no Previous Studies

FORT WAINWRIGHT
Compliance Restoration
Site Descriptions

Site ID: CC-FTRS-04
Site Name: Seward Recreation Camp UST/AST Site
Alias: FRA9300001

STATUS

Regulatory Driver: RCRA
 Contaminants of Concern: Petroleum, Oil and Lubricants (POL)
 Media of Concern: Soil, Surface Water

Phases	Start	End
ISC.....	199204.....	199209
INV.....	199210.....	199503
CAP.....	199503.....	199504
IRA.....	199504.....	199810
IMP(C).....	199910.....	199911
IMP(O).....	199912.....	204510
RIP Date:	199912	
RC Date:	204510	

SITE DESCRIPTION

The Seward Recreation Camp (SRC) in Seward, Alaska is a recreational facility transferred in 2009 to FWA from Fort Richardson and operated by the installation's Morale, Welfare, and Recreation Department. The SRC was formerly Fort Raymond, an Army Post established during World War II to provide protection for the Port of Seward and Resurrection Bay. The SRC occupies about 12 acres and provides lodging in the form of 56 motel-style rooms, 12 townhouses, and a campground/RV area. Fish cleaning facilities and a grounds maintenance building also occupy the site. The SRC provides fishing charters, fishing equipment and boat rental in the summer and snow machine rental during the winter. The SRC has been in operation since the 1960s and underwent significant refurbishing in 1995-1996.

Contaminated soil and groundwater at the site were caused by a broken UST supply line. The USTs were removed in 1995 and replaced with ASTs. The state of Alaska and the Army have agreed to natural attenuation and long-term groundwater monitoring. The city of Seward has drinking water supply wells located immediately downgradient from the site. Monitoring is required to ensure that the city's drinking water supply is not impacted. The Army plans to continue monitoring the plume, verifying the plume is not expanding. The plume has not shown any signs of movement. The Army and the ADEC agree to reduce the sampling schedule to biennial until 2015 (2011, 2013, 2015) and then every five years after that (2020, 2025, 2030).

CLEANUP/EXIT STRATEGY

During the RA(O) phase, groundwater monitoring will continue until COCs decrease to below cleanup levels. Based on the current trend of stable contaminant concentrations, this site will likely require groundwater monitoring for the foreseeable future. While it is anticipated that monitoring could be decreased in the future to every five years, this CTC is based on no change to the current sampling frequency, number of wells, or analytes at these sites. The Remedial Program Managers (RPM) will reconsider this schedule at the next FFA meeting. This CTC includes monitoring through FY45 (per guidance, the CTC can only assume a maximum of 30 years). ICs will be monitored annually and groundwater monitoring will be conducted every two years in the RA(O) phase through FY45.

Site ID: CC-FTWW-01
Site Name: Bldg 3598/3595
Alias: FTW9100026

STATUS

Regulatory Driver: RCRA

Contaminants of Concern: Petroleum, Oil and Lubricants (POL)

Media of Concern: Soil

Phases	Start	End
ISC.....	199209.....	199209
INV.....	200410.....	200505
IMP(C).....	200810.....	201009
LTM.....	201302.....	204409

RIP Date: N/A

RC Date: 201202

SITE DESCRIPTION

This site is the location of Cat (Heavy Equipment) Shed at the FWA Central Heating and Power Plant. Two bulk oil USTs and one diesel fuel UST were located at the site. The site assessment indicated that the diesel fuel UST leaked; however, field investigation at the time of removal only two USTs were found and removed. Based on the OU5 ROD this site was deferred to the two party (i.e. Army and ADEC) petroleum strategy sites agreement.

CLEANUP/EXIT STRATEGY

LUC/ICs digging and groundwater use restrictions will remain in place for the foreseeable future.

Site ID: CC-FTWW-02
Site Name: Forward Air Refueling Point (FARP)
Alias: FWA9100026

STATUS

Regulatory Driver: CERCLA
 Contaminants of Concern: Petroleum, Oil and Lubricants (POL)
 Media of Concern: Groundwater, Soil

Phases	Start	End
PA.....	199610.....	199709
SI.....	200810.....	200909
RA(C).....	200910.....	201010
RA(O).....	201010.....	201312
LTM.....	201401.....	204412
RIP Date:	201010	
RC Date:	201312	

SITE DESCRIPTION

Former USTs and oil water separators were connected to a washrack/loading rack at the site. USTs were removed in 1996 and it was found that leaks had occurred. The former refueling point was taken off-line at that time, and the ASTs installed. The FARP was upgraded to a self-contained storage and distribution facility and will remain in use for the foreseeable future. The temporary ASTs and containment dike were demolished.

The FARP was built as a temporary answer for a refueling point. A limited UST PA completed in May 1997 indicated contaminated groundwater and soils at this site. The FARP system has been upgraded to a 40,000-gallon, self-contained storage and distribution facility. The FARP will remain in service for the foreseeable future. It is likely the investigation start may also be impacted by new construction in adjoining areas. An SI was performed in 2009 to delineate the extent of contamination. LUCs are in place at this site.

An investigation in 2009/10 determined the extent of the contamination at the site. The results of the investigation determined DRO exceedances in one well. Soil samples were determined to have DRO and TCE exceedances above cleanup levels. Based on a 2014 USAEC Program Review, it was discovered that ADEC had approved the site for closure with ICs in 2013. Therefore, the RAO phase was closed and LTM opened in 2014.

CLEANUP/EXIT STRATEGY

During the RA(O) phase, groundwater monitoring will continue until COCs decrease to below applicable cleanup levels. The site is currently being monitored annually. It is anticipated that groundwater monitoring may be decreased in the future from annually to every five years and then discontinued completely; however, that determination has not yet been approved by the RPMs. Therefore, the CTC assumes continued annual monitoring of the five wells for the next 30 years through FY43. ICs will be monitored annually through FY44.

Site ID: CC-FTWW-03
Site Name: Vet Clinic/Boat Shop (Bldgs 2062/2063)
Alias: FWA9100026

STATUS

Regulatory Driver: CERCLA

Contaminants of Concern: Petroleum, Oil and Lubricants (POL)

Media of Concern: Groundwater, Soil

Phases	Start	End
PA.....	199510.....	199609
SI.....	199510.....	199609
RA(C).....	199605.....	200912
LTM.....	201406.....	204405

RIP Date: N/A

RC Date: 201405

SITE DESCRIPTION

The site is located between former Building 2062 and Building 2063. A UST (No. 242) was removed in 1995. The PA conducted during tank removal indicated extensive soil and groundwater contamination at the site. Limited soil removal (350 cy) took place during the PA. An indepth SI conducted in 1996 indicated petroleum contamination in soil and groundwater at the site.

The 2011 and 2013 monitoring events indicate POL-contaminant levels in the groundwater remain above state of Alaska water quality levels, and the site could not be considered for closure; however, analytical results indicated that the boundary is defined and appears stable. The site will be monitored on a biennial basis for 10 years, then on a five-year basis until projected site closure. LUC/ICs are in place at the source area.

Based on a May 2014 letter from ADEC the site is RC with ICs. As a result the RAO phase was changed to LTM and the site was RC in May 2014.

CLEANUP/EXIT STRATEGY

During the LTM phase, groundwater monitoring will be conducted biennially at the former Building 2062/63 site. While it is anticipated that monitoring could be decreased in the future from biennially to every five years and then discontinued completely, the CTC is based on no change to the current sampling frequency, number of wells, or analytes at these sites. Monitoring will continue until COCs decrease to below the applicable cleanup levels. Monitoring and ICs will continue at the site for 30 years.

Site ID: CC-FTWW-103
Site Name: Aviation Task Force & Building 3004
Alias: ATF

STATUS

Regulatory Driver: CERCLA

Contaminants of Concern: Pesticides, Petroleum, Oil and Lubricants (POL), Polychlorinated Biphenyls (PCB), Polycyclic Aromatic Hydrocarbons (PAH), Semi-volatiles (SVOC), Volatiles (VOC)

Media of Concern: Soil

Phases	Start	End
PA.....	200808.....	200809
SI.....	201302.....	201712
RIP Date:	N/A	
RC Date:	201712	

SITE DESCRIPTION

The ATF is a large area that extends approximately 1,900 yards to the east from the east side of Hangar 3 (Building 3002) to the west side of the newly constructed Aircraft Parts Warehouse (Building 2076), and approximately 300 yards north from the northern shoulder of Montgomery Road to the southern edge of the former South Point Refueling System taxiway.

Historical spills and releases have occurred in this area as a result of normal activities (aircraft parking, maintenance, refueling, re-arming, cargo storage and loading activities, and other related activities) since 1940. The entire area was also used for staging and storing drums of hazardous materials/hazardous waste, dry-goods, equipment, and other similar types of products. During World War II, several thousand tons of supplies and over 8,000 aircraft transferred to the Soviet Union from this location. Due to the sporadic and irregular patterns of contamination encountered, the contaminated areas are assumed to have been caused by accidental spillage during normal activities and not by a single event. Aerial spraying of pesticides throughout the cantonment area was a routine occurrence. It is possible that some of the pesticide contamination encountered in this area was a result of these activities.

There are four specific source areas within this parcel of land that will require additional investigation:

- Hangar 3 Utilidor Expansion.
- Building 3004.
- Former Electronics Maintenance Facility (Building 2104).
- Building 2077 Parking Lot.

The site will be investigated in FY15 under the SI/RI contract.

CLEANUP/EXIT STRATEGY

The results of the SI will be evaluated to determine if the site should move into the RI/FS phase. It is unclear at this time what the conclusions of the investigations will be or what, if any, actions will need to be taken in the future. With this uncertainty, it is not possible at this time to postulate what the exit strategy for this site will be.

Site ID: CC-FTWW-104
Site Name: Spill area south of Building 3485
Alias: None

STATUS

Regulatory Driver: CERCLA

Contaminants of Concern: Petroleum, Oil and Lubricants (POL), Volatiles (VOC)

Media of Concern: Groundwater, Soil

Phases	Start	End
PA.....	200906.....	200906
SI.....	200907.....	200908
RI/FS.....	201302.....	201802

RIP Date: N/A

RC Date: 201802

SITE DESCRIPTION

Building 3485 is located in the southern portion of the FWA cantonment area, on the northeast corner at the intersection of Chippewa Avenue and Luzon Avenue. This site was part of the area used for refueling Army equipment and machines during the 1940s and 1950s; diesel and gasoline USTs were placed on site during that period. It is adjacent to a refueling station to the east, battle command training center to the north, and Building 3479, another motor pool to the west.

In 2009, during construction activities, a previously unknown and abandoned quartermaster re-fueling point complete with concrete pump island, three USTs and related piping was found approximately 130 feet east of Motor Pool Building 3485. In July of 2009, three USTs (one 3,000-gallon diesel tank and two joined 1,300-gallon gasoline tanks), their contents, and associated pipeline were removed from the site. Approximately 800 cy of POL and VOC-contaminated soil was excavated. The excavation was advanced to a depth of 12 feet, at which depth groundwater was encountered.

Confirmation soil and groundwater samples were collected from the excavation. Ten soil samples exceeded cleanup criteria for GRO, DRO, and VOCs, (including benzene and EDB), while 10 groundwater grab samples also exceeded groundwater cleanup criteria for DRO and VOCs. In order to further delineate the contamination, 15 direct-push wells were installed and 15 screen point (SP) - 16 groundwater grab samples collected. Two soil samples exceeded cleanup criteria for benzene. Ten of the groundwater grab samples also exceeded groundwater cleanup criteria for DRO and multiple VOCs. The areal extent of contamination in either the soil or groundwater has not been fully delineated (Jacobs, 2010a).

Following removal of the USTs and the follow-up investigation, the construction contractor encountered an 8-foot by 8-foot underground wooden vault with a wood utility duct (a buried utility box designed to protect utility lines that cross high-traffic areas) located approximately 200 feet southeast of the building. The vault and associated piping were removed, along with 120 cy of POL contaminated soil. The excavation reached a depth of 11 feet, which was the groundwater interface. Confirmation soil samples collected from the excavation detected POL contamination above the cleanup criteria (Jacobs, 2010b).

The site is currently capped with 4 feet of clean NFS fill material and a 12-inch reinforced concrete parking facility.

The site will be investigated under the SI/RI contract . The purpose of the investigation shall be to delineate the extent of contamination in the soil and groundwater, and determine the need for remediation or long-term monitoring at the site. The Army will also determine the potential for vapor intrusion in the building and conduct vapor sampling as appropriate. The investigation is fully funded but the costs beyond the investigation phase cannot be determined until the investigation is complete.

CLEANUP/EXIT STRATEGY

The results of the RI will be evaluated to finalize the exit strategy. It is unclear at this time what the conclusions of the investigations will be or what, if any, actions will need to be taken in the future. With this uncertainty, it is not possible at this time to postulate what the exit strategy for this site will be.

Site ID: CC-FTWW-105
Site Name: 336B Barracks
Alias: None

STATUS

Regulatory Driver: CERCLA

Contaminants of Concern: Munitions and explosives of concern (MEC), Munitions constituents (MC), Polycyclic Aromatic Hydrocarbons (PAH), Semi-volatiles (SVOC), Volatiles (VOC)

Media of Concern: Soil

Phases	Start	End
PA.....	201006.....	201006
SI.....	201007.....	201010
RI/FS.....	201302.....	201802

RIP Date: N/A

RC Date: 201802

SITE DESCRIPTION

The 336B Barracks site is located on the corner of Montgomery Road and Santiago Avenue. Historical records and aerial photographs taken between 1956 and 1993 indicate the 336B Barracks site was previously the site of five ammunition bunkers. After the bunkers were decommissioned, the area was used as a maneuver/training area for the military.

In April 2009, USACE conducted a pre-construction site investigation and identified localized soil contamination with VOC, SVOC, and explosives constituents in the northwest corner of the lot, collocated with a former bunker site (USACE, 2009).

In 2010, four AOCs were investigated. Approximately 500 pounds of scrap metal were excavated and removed. Approximately 70 cy of POL-contaminated soil was also removed from the center of the site in response to contamination identified during construction activities. A geophysical investigation on a large area to the northwest of the new barracks found four .50-caliber ball rounds of small arms ammunition that were determined to be safe and disposed of properly. Other anomalies in the area were scrap metal. A subsequent geoprobe investigation in this area indicated DRO and SVOC contamination remained in the soil above ADEC cleanup levels. A limited groundwater investigation did not find any contamination exceeding cleanup levels (Jacobs, 2011c).

This site will be further investigated as part of the SI/RI contract. The investigation is fully funded but the costs beyond the investigation phase cannot be determined until the investigation is complete.

CLEANUP/EXIT STRATEGY

The results of the RI will be evaluated to finalize the exit strategy. It is unclear at this time what the conclusions of the investigations will be or what, if any, actions will need to be taken in the future. With this uncertainty, it is not possible at this time to postulate what the exit strategy for this site will be.

Site ID: CC-FTWW-106
Site Name: Pipeline Breaks
Alias: None

STATUS

Regulatory Driver: OTHER

Contaminants of Concern: Petroleum, Oil and Lubricants (POL)

Media of Concern: Soil

Phases	Start	End
PA.....	199908.....	199909
SI.....	200005.....	201503
RI/FS.....	201503.....	202009

RIP Date: N/A

RC Date: 202009

SITE DESCRIPTION

Diesel fuel and leaded gasoline contamination was found in the soil during the removal/abandonment of this historical multi-fuel pipeline. It is presumed that the contamination came from historical fuel leaks and spills. The actual location of the abandoned pipeline was not updated on the installation's master plans and was constantly being damaged by maintenance and construction activities. Most of the recent damage resulted in a limited spill response and cleanup activity, but many of the historical breaks were never recorded. Historical records indicate that the line carried diesel fuel and various grades of leaded gasoline. The POL line was taken out of service in the 1950s, but the fuel was not removed from the lines prior to its abandonment. The full nature and extent of the contamination has not been characterized.

The CANOL pipeline was a six-inch pipeline constructed in the 1940s to connect fuel facilities in Whitehorse, Canada to Fairbanks, Alaska. The pipeline was primarily used to transport diesel fuel and leaded gasoline (MOGAS) to the interior of Alaska. The line was replaced as the primary fuel pipeline to FWA in the 1950s with the construction of the 8-inch Haines-Fairbanks Multi-Fuel Pipeline. The 6-mile CANOL pipeline corridor within the cantonment area followed the Alaska Rail Road Bed from the installation's southeastern boundary until it reached the south gate of LAFB (now FWA). From there it turned north and ran through the middle of the cantonment area from South Gate, to Meridian Road, then followed Meridian Road north to Gaffney Road, turned east to follow the rail bed through the ROLF, crossed the Chena River, and followed Canol Road up to the Birch Hill tank farm.

A second pipeline, labeled in historical drawings as the Diesel Fuels Oil (DFO), was also located within the close proximity to the CANOL Line. This pipeline extended from Valve Pit B near the former ROLF, crossing Gaffney Road, Montgomery Avenue, Meridian Road, Neely Road, and terminated south of Oak Avenue. Parts of these pipeline are known to have been removed during past construction projects. In 2010 and 2011, significant portions of the two pipelines were either removed or abandoned in place by cleaning out the pipe and filling it with grout. During these activities, several locations along the pipelines were found where fuel had either leaked or been spilled in the past. These areas have yet to be fully investigated and the full extent of the contamination at each site needs to be delineated. The portion of pipe that remains from the South Gate to the southeastern boundary was cleaned and removed or grouted in-place in the summer of 2014.

Based on the FY14 USAEC program review it was determined by the participants that this site would remain open and represent future work on the areas identified in the Bristol (CCFTWW-04) pipe removal efforts. The results of the CCFTWW-04 report will be used as the basis for future work on this site. The investigation is fully funded but the costs beyond the investigation phase cannot be determined until the investigation is complete.

CLEANUP/EXIT STRATEGY

The results of the RI will be evaluated to finalize the exit strategy. It is unclear at this time what the conclusions of the investigations will be or what, if any, actions will need to be taken in the future. With this uncertainty, it is not possible at this time to postulate what the exit strategy for this site will be.

Site ID: CC-FTWW-107
Site Name: Motor Pool BLDGs 3492, 3494, 3496
Alias: None

STATUS

Regulatory Driver: OTHER

Contaminants of Concern: Petroleum, Oil and Lubricants (POL), Volatiles (VOC)

Media of Concern: Groundwater, Soil

Phases	Start	End
PA.....	200905.....	200905
SI.....	200906.....	200908
RI/FS.....	201302.....	201802

RIP Date: N/A

RC Date: 201802

SITE DESCRIPTION

The site is located in the southeastern portion of FWA, north from Chippewa Avenue and south of Rhineland Avenue, along the eastern sides of Buildings 3492, 3494, and 3496. The area comprises approximately 15 acres within a parking area that was built sometime between 1986 and 1993.

In 2009, the existing asphalt and structurally unsound fill were removed, and a 12-inch reinforced concrete parking facility with four feet of NFS fill was constructed over the entire area. During construction activities, over 3,000 surface and near-surface soil samples were field screened for petroleum contamination using a PID. Approximately 6,000 cy of soil with elevated PID readings (over 20 ppm) was removed from the site. Elevated PID readings were identified in multiple areas throughout the site, which indicates a multitude of historical spills. However, these investigations focused on areas directly impacted by construction and were limited in scope in terms of the parameters analyzed.

Up to seven specific AOCs were identified. Grab samples collected from an area to the east of Building 3492 detected benzene above the ADEC soil cleanup level. Two other areas east of this building had elevated PID readings. A small area on the northeast corner of Building 3494, and a larger area to the east of this building also had elevated PID readings, as did two areas to the east of Building 3496. None of these areas have been sufficiently investigated for soil contamination, and groundwater was never investigated (S&W, 2009b).

The site will be further investigated under the SI/RI contract. The investigation is fully funded but the costs beyond the investigation phase cannot be determined until the investigation is complete.

CLEANUP/EXIT STRATEGY

The results of the SI were evaluated and the site moved into the RI/FS phase. It is unclear at this time what the conclusions of the investigations will be or what, if any, actions will need to be taken in the future. With this uncertainty, it is not possible at this time to postulate what the exit strategy for this site will be.

Site ID: CC-FTWW-108
Site Name: BLDG 3498
Alias: None

STATUS

Regulatory Driver: OTHER
Contaminants of Concern: Petroleum, Oil and Lubricants (POL)
Media of Concern: Soil

Phases	Start	End
PA.....	200906.....	200906
SI.....	201302.....	201712
RIP Date:	N/A	
RC Date:	201712	

SITE DESCRIPTION

This site is located outside of the southeast corner of the FWA Vehicle Maintenance Facility (Building 3498); parking lot. The AOC is the former drainage swale/retention area, which is located on the north side of Rhineland Avenue between Luzon Avenue to the west and Eisenhower Road to the east. Water in the retention area generally flows north towards Building 3424 into a retention pond. Gas and diesel powered military equipment is staged in the parking area year round. During spring break up and times of heavy rainfall, water runoff collects in the southeast corner of the parking area. The surface water collects in a French drain that is equipped with a shutoff valve. The general practice has been to use sorbent pads to remove sheen caused by equipment drips and spills from the surface of the water before opening the valve to discharge the water into a gravel drainage swale outside of the fenced and paved parking area. Initially, this was an uncontrolled practice; however, in recent years DPW has placed a lock on the valve. DPW now controls the lock and enforces cleanup at Building 3498 prior to opening the valve for discharge. Extensive grading and re-contouring of the ground surface has taken place since the drainage swale originally drained the parking area (FES, 2012).

POL contamination was discovered in the surface and subsurface soils of a former drainage swale during construction of new utilidor/utilities service south of Building 3485. The utility contractor removed contaminated soil from the work area to the limits of the required utilidor excavations and left contamination in the side walls and floor of the excavations. The drainage swale was not characterized during the utility construction activities.

This site will be further investigated in FY15 under the SI/RI contract. The Investigation is fully funded but the costs beyond the investigation phase cannot be determined until the investigation is complete.

CLEANUP/EXIT STRATEGY

The results of the SI will be evaluated to finalize the exit strategy. It is unclear at this time what the conclusions of the investigations will be or what, if any, actions will need to be taken in the future. With this uncertainty, it is not possible at this time to postulate what the exit strategy for this site will be.

Site ID: CC-FTWW-109
Site Name: Building 1054
Alias: None

STATUS

Regulatory Driver: CERCLA
Contaminants of Concern: Metals, Petroleum, Oil and Lubricants (POL)
Media of Concern: Soil

Phases	Start	End
PA.....	200806.....	201106
SI.....	201107.....	201409
RI/FS.....	201409.....	201802
RIP Date:	N/A	
RC Date:	201802	

SITE DESCRIPTION

Building 1054 is located within the FWA OU5 approximately one block south of the Chena River. From the 1940s to 1986, the site was used as a motor vehicle and equipment maintenance and repair shop and equipment warm storage. Subsequently, it was converted into a temporary emergency/fire response station and Fire Chief and Fire Safety Office. Shortly thereafter, it permanently became Fire Station No. 3.

In 2008, a Phase II ESA/RI was performed in response to the identification of contaminated soils during demolition of the south section of Building 1054. POL and lead contaminated soils were found at the northern corner of Building 1054, along the northwest side of Building 1054, and beneath the footprint of the northeast section of Building 1054. Approximately 35 cy of contaminated soil was excavated from the northern corner and footprint of the building; however, sample results indicated that contaminated soils remained on the northwest side of the building footprint.

During a follow up investigation in 2010, approximately 490 cy of POL contaminated soil and 10 cy of lead contaminated soil were excavated and removed. Confirmation results within the initial response area portion of the building were below ADEC ingestion cleanup criteria for DRO and below ADEC migration to groundwater cleanup criteria for lead, thus indicating no impact on human health or worker safety; however, two locations on the eastern edge next to the building and the southern edge of the excavation contained contaminated soil exceeding the ADEC migration-to-groundwater cleanup criteria for DRO (Jacobs, 2011d). Soil associated with these exceedances remains at the site. Groundwater has not been monitored at this site.

Expansion of the parking area adjacent to Building 1054 is planned. Also, a communications tower located adjacent to the site is scheduled to be replaced. These changes in land use could affect future investigations in this area.

As part of the SI/RI contract, the Army plans to characterize and delineate soil contamination and any impacts to groundwater at the site. The purpose of the investigation shall be to delineate the extent of soil contamination at each hot spot, determine whether groundwater has been affected, and recommend remedial alternatives. The Army will also determine the potential for vapor intrusion in Building 1054 and conduct indoor air and sub-slab sampling, as appropriate. The investigation is fully funded but the costs beyond the investigation phase cannot be determined until the investigation is complete.

It should be noted that this site was determined to be NFA for soil in the July 1994 DD with a referral to OU5 for groundwater. Since this time the land use has changed from a motor pool to a fire station.

CLEANUP/EXIT STRATEGY

The results of the SI were evaluated and the site moved into the RI/FS phase. It is unclear at this time what the conclusions of the investigations will be or what, if any, actions will need to be taken in the future. With this uncertainty, it is not possible at this time to postulate what the exit strategy for this site will be.

Site ID: CC-FTWW-110
Site Name: Building 3014
Alias: None

STATUS

Regulatory Driver: OTHER

Contaminants of Concern: Petroleum, Oil and Lubricants (POL)

Media of Concern: Soil

Phases	Start	End
PA.....	201005.....	201005
SI.....	201006.....	201007
RI/FS.....	201409.....	201802

RIP Date: N/A

RC Date: 201802

SITE DESCRIPTION

Building 3014 is a recently renovated and re-purposed office building located northwest of the intersection of Montgomery Road and Engineer Way. The facility was originally designed and built in the mid-1970s to be a self-help-center for housing residents and troop-unit-self-help personnel and a small engine repair facility. It was constructed adjacent to, but was not part of, the OU1 Building 3015 drum storage site and had a gravel parking area and an outdoor storage area that was uncovered and fenced. The area was used to store yard equipment, small quantities of fertilizers, house-hold repair parts and paints.

In 2010, while conducting utility location activities contaminated soil was encountered at the southeast corner of Building 3014. Analytical sample results from two test pits indicated concentrations of GRO, DRO, several VOCs (1,2,4-trimethylbenzene, 1,3,5-trimethylbenzene, ethylbenzene, naphthalene, n-propylbenzene, 2-methylnaphthalene, and xylenes), and SVOCs (2-methylnaphthalene and naphthalene) above the ADEC cleanup criteria. These soils remain in place at Building 3014. New utilities have been placed and the area has been backfilled with clean soil and covered with new asphalt (Jacobs, 2011a).

In 2011, while preparing to pave the Building 3014 site, POL contaminated soil was encountered in two new areas, one approximately 20 feet east of the building, and the other approximately 100 feet east of the building. Approximately 120 cy of contaminated soil was excavated and removed during investigation activities. Confirmation sample results indicated DRO contamination exceeding ADEC cleanup criteria in two locations. These soils remain in place due to their proximity to buried utilities (Jacobs, 2013d). Groundwater has not been investigated at the site.

As part of the SI/RI contract, the Army will characterize and delineate soil contamination and any impacts to groundwater at the site. The purpose of the investigation will be to delineate the extent of soil contamination at each hot spot, determine whether groundwater has been affected, and recommend remedial alternatives. The Army will also determine the potential for vapor intrusion in Building 3014 and conduct indoor air and sub-slab sampling, as appropriate. The investigation is fully funded but the costs beyond the investigation phase cannot be determined until the investigation is complete.

CLEANUP/EXIT STRATEGY

The results of the RI will be evaluated to finalize the exit strategy. It is unclear at this time what the conclusions of the investigations will be or what, if any, actions will need to be taken in the future. With this uncertainty, it is not possible at this time to postulate what the exit strategy for this site will be.

Site ID: CC-FTWW-111
Site Name: Montgomery Road Extension
Alias: None

STATUS

Regulatory Driver: CERCLA

Contaminants of Concern: Petroleum, Oil and Lubricants (POL), Polycyclic Aromatic Hydrocarbons (PAH), Volatiles (VOC)

Media of Concern: Soil

Phases	Start	End
PA.....	201005.....	201005
SI.....	201006.....	201108
RI/FS.....	201409.....	201802

RIP Date: N/A

RC Date: 201802

SITE DESCRIPTION

This site is located northeast of 10th Street and Missouri Road. Activities performed at this site were in response to the construction of the Montgomery Road Extension. Historical aerial photographs indicate that extensive warehousing activities occurred near the proposed road extension. Rows of drums stored on a gravel pad for many years suggest the potential for buried drums and POL and chlorinated compound-contaminated soil.

There are two AOCs at this site: contaminated soils associated with the Montgomery Road Extension; and, a sewage treatment facility vault.

1. Montgomery Road Extension AOC is located immediately north of the Directorate of Logistics main vehicle, heavy equipment, and materials storage facility, and is bounded by 10th street on the west, the former Whidden Avenue on the east, and Gaffney Road to the north.

2010 investigations included a geophysical survey to determine the nature and extent of subsurface metallic anomalies, conducting test pitting activities to aid in the identification of large anomalies, and identifying any contamination or munitions and explosives of concern (MEC) present in surface and subsurface soil and groundwater. Approximately 5 cy of POL-contaminated soil, two 55-gallon drums, and one over-pack of scrap metal was excavated and removed from the Montgomery Road site. Samples results collected from surface soil (1 foot bgs) during test pitting activities exceeded ADEC cleanup criteria in two areas near the western end of the road extension. The western-most AOC had exceedances of DRO, RRO, PCE, lead, and benzene, while the other AOC had exceedance of DRO only. Samples collected from subsurface soils (3.5 to 16.5 feet bgs) during soil boring activities in these two areas had results exceeding ADEC cleanup criteria for DRO, which was also detected in one groundwater sample at a level slightly exceeding ADEC cleanup criteria.

In 2011, investigations were conducted to delineate lead and VOC contaminated soil in the western-most AOC. Approximately 24 cy of contaminated soil was removed from the site. The excavation was advanced to a depth of 3 feet bgs; all confirmation sample results from the excavation were below ADEC cleanup criteria. DRO contaminated soil in the surface, subsurface, and groundwater remains on-site in two areas requiring delineation. The road extension has since been completed.

2. The concrete Sewage Treatment Facility Vault was discovered during construction activities in 2010 in the northeast section of the source area. The vault and metal lid were bgs and were covered by thick vegetation. The vault was later identified as an abandoned and buried sewage treatment facility. The vault contained standing water, which was sampled and found to have benzene, lead, DRO, RRO, and PCBs at levels exceeding the ADEC groundwater cleanup levels. The water was removed from the vault and disposed of. The vault has subsequently been closed by filling it with concrete and sand.

Limited soil and groundwater sampling conducted in the area directly adjacent to the vault did not detect any contaminated soil or groundwater around the vault. An outlet pipe exiting the vault is thought to go to the Chena River but has not been completely mapped or traced, and no samples were collected at the outfall.

As part of the SI/RI contract, the Army will characterize and delineate soil contamination and investigate any impacts to groundwater at sites along the road extension, as well as investigating potential impacts to soil and groundwater at the former sewage treatment facility vault. The investigation is fully funded but the costs beyond the investigation phase cannot be determined until the investigation is complete.

Site ID: CC-FTWW-111
Site Name: Montgomery Road Extension
Alias: None

CLEANUP/EXIT STRATEGY

The results of the RI will be evaluated to finalize the exit strategy. It is unclear at this time what the conclusions of the investigations will be or what, if any, actions will need to be taken in the future. With this uncertainty, it is not possible at this time to postulate what the exit strategy for this site will be.

Site ID: CC-FTWW-112

Site Name: Sage Hill

Alias: None

STATUS

Regulatory Driver: CERCLA

Contaminants of Concern: Munitions constituents (MC), Petroleum, Oil and Lubricants (POL), Volatiles (VOC)

Media of Concern: Soil

Phases	Start	End
PA.....	201107.....	201107
SI.....	201302.....	201712

RIP Date: N/A

RC Date: 201712

SITE DESCRIPTION

This site is located within Training Area 115, which is in the upper northeast corner of the Installation boundary, and south of the Upper Ammunition Supply Point, within the explosive safety zone. It is bounded by Birch Hill Road to the south, East Ammo Road to the east, Ammo Road to the north, and Birch Hill Loop to the west. It consists of approximately 280 acres.

Range Control personnel were surveying the Sage Hill Road area to locate new obstacles within the Improvised Explosive Device Detection (IEDD) training area when they came upon a cache of semi-buried and surface disposed 55-gallon drums. DPW Environmental personnel inspected the site and found that some drums were lying on the ground, and some had sunk into the permafrost rich silt. The drums were from the late 1940s and 1950s and had previously contained a variety of materials (i.e. oil, pesticides, PCE, and other indiscernible materials). A closer look at the area revealed approximately 24 smaller items indicating explosive munitions had been in the area. After closer inspection of the area, empty metal and wooden boxes of fuses and detonation caps were found to be collocated with the ammunition cans and drums. The area surrounding these items also had small military wood and canvas shelters in various stages of decay due to age.

Follow-on conversations with Defense Logistics Agency (DLA) ammunition personnel and a review of historical photos suggest the area was used for open storage/distribution of ammunition over many years and had as many as 24 individual storage/distribution points. Historical photos indicate storage and distribution activities were conducted throughout the area from 1942 to 1959.

Historical operational records citing quantities and types of munitions stored and distributed at each point are no longer available at the Installation; however, it is presumed that only conventional ordnance was distributed from these points. It is also presumed that the drums were used to supply the points with fuel for generators, heaters, and other items as well as providing materials to maintain the mini-outposts.

The area is densely wooded and most of the former open storage/distribution points and interconnecting trails have been overgrown by native vegetation. Despite the fact that the source area is on the side of a hill, there are also a significant number of small ponds, swamps, and wetlands throughout the source area. The area is open to troop training, hunters, hikers, ORV enthusiasts, and non-military personnel.

As part of the SI/RI contract, the Army will conduct a walk-through of the entire area to identify the location of any additional distribution points and evaluate the discarded drums. The SI/RI contract is fully funded and costs beyond the investigation cannot be determined until the investigation is complete.

CLEANUP/EXIT STRATEGY

The results of the SI will define the next phase. It is unclear at this time what the conclusions of the investigations will be or what, if any, actions will need to be taken in the future. With this uncertainty, it is not possible at this time to postulate what the exit strategy for this site will be.

Site ID: CC-FTWW-113
Site Name: Northern Lights Housing Area
Alias: None

STATUS

Regulatory Driver: CERCLA

Contaminants of Concern: Petroleum, Oil and Lubricants (POL)

Media of Concern: Groundwater, Soil

Phases	Start	End
PA.....	201204.....	201304
SI.....	201304.....	201409
RI/FS.....	201410.....	201802

RIP Date: N/A

RC Date: 201802

SITE DESCRIPTION

The Northern Lights Housing site is an active construction site located southeast of the intersection of Gaffney Road and 600th Street on FWA. The area has historically been used for both permanent and temporary housing. Lend Lease Corporation, Ltd. (Lend Lease) and the Army partnered to form North Haven Communities LLC (North Haven), which manages and provides housing, maintenance, and resident services at FWA. In preparation for North Haven's plan to upgrade housing at the Northern Lights Housing site, old housing units were demolished. Construction crews were in the process of excavating the footprints for new building pads when they encountered abandoned utilidor, piping, and potential soil contamination in seven different areas.

A non-Defense Environmental Restoration Program (DERP) funded removal action was conducted in 2012. Approximately 1,430 cy of contaminated soil and 50 cy of soil mixed with wood debris was removed from seven areas at the Northern Lights Housing site. A total of 126 confirmation samples were collected from the seven areas combined. Soil samples were analyzed for a combination of GRO, DRO, RRO, VOC, SVOC, RCRA metals, and herbicides. Clean limits were reached at five of the sites (B43, B42, B42W, B35-36, and B37). DRO- and SVOC-contaminated soil remains in place at B46, and DRO- and VOC-contaminated soil remains in place at B51 (Jacobs, 2013e). These two areas need to be investigated to determine the extent of the contamination remaining in the soils. Groundwater has not been investigated in this area.

The site will be further investigated under the SI/RI contract. The SI/RI contract is fully funded and costs beyond the investigation cannot be determined until the investigation is complete.

CLEANUP/EXIT STRATEGY

The results of the RI will be evaluated to finalize the exit strategy. It is unclear at this time what the conclusions of the investigations will be or what, if any, actions will need to be taken in the future. With this uncertainty, it is not possible at this time to postulate what the exit strategy for this site will be.

Site Closeout (No Further Action) Summary

Site ID	Site Name	NFA Date	Documentation
CC-FTWW-04	Pipeline Remediation-POL Source Removal	201503	

CR Schedule

Date of CR Inception: 199204

Past Phase Completion Milestones

1992

ISC (CC-FTRS-04 - Seward Recreation Camp UST/AST Site, CC-FTWW-01 - Bldg 3598/3595)

1995

INV (CC-FTRS-04 - Seward Recreation Camp UST/AST Site)

CAP (CC-FTRS-04 - Seward Recreation Camp UST/AST Site)

1996

SI (CC-FTWW-03 - Vet Clinic/Boat Shop (Bldgs 2062/2063))

PA (CC-FTWW-03 - Vet Clinic/Boat Shop (Bldgs 2062/2063))

1997

PA (CC-FTWW-02 - Forward Air Refueling Point (FARP))

1999

PA (CC-FTWW-106 - Pipeline Breaks)

IRA (CC-FTRS-04 - Seward Recreation Camp UST/AST Site)

2000

IMP(C) (CC-FTRS-04 - Seward Recreation Camp UST/AST Site)

PA (CC-FTWW-04 - Pipeline Remediation-POL Source Removal)

SI (CC-FTWW-04 - Pipeline Remediation-POL Source Removal)

2005

INV (CC-FTWW-01 - Bldg 3598/3595)

2008

PA (CC-FTWW-103 - Aviation Task Force & Building 3004)

2009

PA (CC-FTWW-104 - Spill area south of Building 3485, CC-FTWW-107 - Motor Pool BLDGs 3492, 3494, 3496 , CC-FTWW-108 - BLDG 3498)

SI (CC-FTWW-02 - Forward Air Refueling Point (FARP), CC-FTWW-104 - Spill area south of Building 3485, CC-FTWW-107 - Motor Pool BLDGs 3492, 3494, 3496)

2010

SI (CC-FTWW-110 - Building 3014)

IMP(C) (CC-FTWW-01 - Bldg 3598/3595)

PA (CC-FTWW-105 - 336B Barracks, CC-FTWW-110 - Building 3014, CC-FTWW-111 - Montgomery Road Extension)

RA(C) (CC-FTWW-03 - Vet Clinic/Boat Shop (Bldgs 2062/2063))

2011

SI (CC-FTWW-105 - 336B Barracks, CC-FTWW-111 - Montgomery Road Extension)

PA (CC-FTWW-109 - Building 1054, CC-FTWW-112 - Sage Hill)

RA(C) (CC-FTWW-02 - Forward Air Refueling Point (FARP))

2013

PA (CC-FTWW-113 - Northern Lights Housing Area)

2014

RA(O) (CC-FTWW-02 - Forward Air Refueling Point (FARP))

SI (CC-FTWW-109 - Building 1054, CC-FTWW-113 - Northern Lights Housing Area)

2015

SI (CC-FTWW-106 - Pipeline Breaks)

RI/FS (CC-FTWW-04 - Pipeline Remediation-POL Source Removal)

CR Schedule

Projected Phase Completion Milestones

See attached schedule

Projected Record of Decision (ROD)/Decision Document (DD) Approval Dates

To Be Determined

Final RA(C) Completion Date: 201010

Schedule for Next Five-Year Review: 2016

Estimated Completion Date of CR at Installation (including LTM phase): 204510

FORT WAINWRIGHT CR Schedule

 = phase underway

SITE ID	SITE NAME	PHASE	FY17	FY18	FY19	FY20	FY21	FY22+
CC-FTRS-04	Seward Recreation Camp UST/AST Site	IMP(O)						
SITE ID	SITE NAME	PHASE	FY17	FY18	FY19	FY20	FY21	FY22+
CC-FTWW-01	Bldg 3598/3595	LTM						
SITE ID	SITE NAME	PHASE	FY17	FY18	FY19	FY20	FY21	FY22+
CC-FTWW-02	Forward Air Refueling Point (FARP)	LTM						
SITE ID	SITE NAME	PHASE	FY17	FY18	FY19	FY20	FY21	FY22+
CC-FTWW-03	Vet Clinic/Boat Shop (Bldgs 2062/2063)	LTM						
SITE ID	SITE NAME	PHASE	FY17	FY18	FY19	FY20	FY21	FY22+
CC-FTWW-103	Aviation Task Force & Building 3004	SI						
SITE ID	SITE NAME	PHASE	FY17	FY18	FY19	FY20	FY21	FY22+
CC-FTWW-104	Spill area south of Building 3485	RI/FS						
SITE ID	SITE NAME	PHASE	FY17	FY18	FY19	FY20	FY21	FY22+
CC-FTWW-105	336B Barracks	RI/FS						
SITE ID	SITE NAME	PHASE	FY17	FY18	FY19	FY20	FY21	FY22+
CC-FTWW-106	Pipeline Breaks	RI/FS						
SITE ID	SITE NAME	PHASE	FY17	FY18	FY19	FY20	FY21	FY22+
CC-FTWW-107	Motor Pool BLDGs 3492, 3494, 3496	RI/FS						
SITE ID	SITE NAME	PHASE	FY17	FY18	FY19	FY20	FY21	FY22+
CC-FTWW-108	BLDG 3498	SI						
SITE ID	SITE NAME	PHASE	FY17	FY18	FY19	FY20	FY21	FY22+
CC-FTWW-109	Building 1054	RI/FS						
SITE ID	SITE NAME	PHASE	FY17	FY18	FY19	FY20	FY21	FY22+
CC-FTWW-110	Building 3014	RI/FS						
SITE ID	SITE NAME	PHASE	FY17	FY18	FY19	FY20	FY21	FY22+
CC-FTWW-111	Montgomery Road Extension	RI/FS						
SITE ID	SITE NAME	PHASE	FY17	FY18	FY19	FY20	FY21	FY22+
CC-FTWW-112	Sage Hill	SI						
SITE ID	SITE NAME	PHASE	FY17	FY18	FY19	FY20	FY21	FY22+
CC-FTWW-113	Northern Lights Housing Area	RI/FS						

Community Involvement

Technical Review Committee (TRC): None

Community Involvement Plan (Date Published): 200301

Restoration Advisory Board (RAB): RAB established 199709

RAB Adjournment Date: 200409

RAB Adjournment Reason: There is no longer sufficient, sustained community interest.

Additional Community Involvement Information

Newsletters are sent out on an annual basis or more frequently, as needed or requested. Solicitation to see if there is sufficient interest for a RAB reactivation was sent out in February 2007, but not enough interest was generated in reactivating the RAB at that time. RAB interest was last solicited in spring of 2015, but not enough interest was generated in reactivating the RAB at that time.

Administrative Record is located at

DPW Fort Wainwright
3023 Gaffney Road
Fort Wainwright, AK 99703
Phone number: 907-361-4512

Information Repository is located at

Noel Wien Library
1215 Cowles Street
Fairbanks, AK 99701
Phone number: 907-459-1020

Current Technical Assistance for Public Participation (TAPP):N/A

TAPP Title: N/A

Potential TAPP: N/A

